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ARI TECHNICAL REPORT  
P-78-4

# TEC MEDIA ALTERNATIVES FOR THE FY 78-83 PERIOD: DELIVERY SYSTEMS DATA BASE

by

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2500 Colorado Boulevard  
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DECEMBER 1978

Contract DAHC 19-76-C-0027

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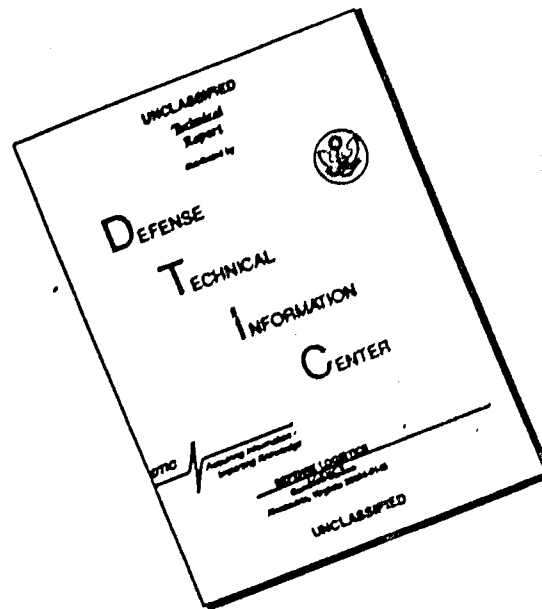
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REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER P-78-4	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) TEC MEDIA ALTERNATIVES FOR THE FY 78-83 PERIOD: DELIVERY SYSTEMS DATA BASE.		5. TYPE OF REPORT & PERIOD COVERED Annex B. Final
7. AUTHOR(s) L. A. Silver, F. D. Bennik, A. K. Butler and M. A. Benesch		6. PERFORMING ORG. REPORT NUMBER TM-5985/002/01 Annex B
9. PERFORMING ORGANIZATION NAME AND ADDRESS System Development Corporation 2500 Colorado Boulevard Santa Monica, CA 90406		8. CONTRACT OR GRANT NUMBER(s) DAHC 19-76-C-0027
11. CONTROLLING OFFICE NAME AND ADDRESS US Army Field Artillery School Fort Sill, OK		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS 2Q763743A771
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) US Army Research Institute for the Behavioral and Social Sciences 5001 Eisenhower Avenue, Alexandria VA 22333		12. REPORT DATE December 1978
16. DISTRIBUTION STATEMENT (of this Report) 9) Final rept.		13. NUMBER OF PAGES 457
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) 14) SDC-TM-5985/002/01-ANNEX-B 18) ARI 19) P-78-4		15. SECURITY CLASS. (of this report) Unclassified
15a. DECLASSIFICATION/DOWNGRADING SCHEDULE		
18. SUPPLEMENTARY NOTES Research monitored technically by L. H. Nawrocki and F. M. Farrell, Educational Technology & Simulation Technical Area, ARI		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) TEC media Instructional Systems Development (ISD) Training Extension Course (TEC) Delivery systems data base Individual training		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A wide range of methods and media are available or potentially available for delivering current Army Training Extension Course (TEC) systems at unit levels, for individual/collective training. In order to help Army training developers choose delivery systems for a variety of training requirements, three interrelated user products were designed, developed, and documented. The first is a Procedure Guide for Delivery Systems Selection, published as ARI P-78-3, to help developers select the best mix of systems for overall		



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training programs and for lesson modules. This document is the second and is designed to be used either in conjunction with the first or independently for reference. The third, MOS 13F/FIST Sample Application (ARI P-78-5), illustrates the combined use of the first two as applied to training for the Fire Support Specialist (MOS 13F). ARI Technical Report TR-78-A30 provides an overview of the entire project, describing the developmental research as well as the three products.

→ This data base contains information on a wide range of Army delivery systems currently or potentially available to the US Army Field Artillery School. It is an expandable document which indexes the pertinent characteristics of 42 Army delivery systems grouped into 12 "families"--job materials, printed materials, training/combat literature, instructor with standard aids, audio-only, audio visual, television/video recording, computer assisted/managed instruction, embedded training, training devices/simulators, and command/staff battle simulations.

Accession For

NTIS GRA&I	<input checked="checked" type="checkbox"/>
DDC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	

By \_\_\_\_\_

Distribution/ \_\_\_\_\_

Availability Codes

Dist.	Avail and/or special
A	

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

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## INTRODUCTION

This data base contains information on a wide range of Army delivery systems either currently available to USAFAS and/or Field Artillery units, or projected to be available from DA sources in the FY 78-83 period. It was produced as Annex B of "TEC Media Alternatives for the FY 78-83 Period," which has been published as ARI Technical Report TR-78-A30. *A068046*

The Delivery Systems data Base (ARI P-78-4) is designed to be used in conjunction with key decision points of the two-stage Procedure Guide for Delivery Systems Selection (ARI P-78-3). The Data Base, however, may also be used independently for awareness information. MOS 12F/FIST Sample Application (ARI P-78-5) is an example in the use of the Procedure Guide (ARI P-78-3) together with the Data Base (ARI P-78-4), using selected tasks and personnel data from MOS 13F/FIST (Fire Support Team).

## ORGANIZATION

The data base is organized into "Family" groups, each Family containing one or more "Member" delivery system. A description of the Family precedes its collection of Member files. Accompanying the Family description is a Member Characteristics table which summarizes general information about each member that is contained in the Family file. The data base beginning on page 00 contains information on 42 members. The delivery system member files are grouped into 12 Families. The table of contents at the front of this document may be used as a complete index to all Families and Members. In addition, as an overview, a listing is presented as follows:

### A. JOB MATERIALS

1. Field Manuals (FMs)
2. Technical Manual (TMs)
3. ITDT Technical Manuals

### B. PRINTED MATERIALS

1. TEC Print
2. Correspondence Courses

- C. TRAINING/COMBAT LITERATURE
  - 1. Soldier's Manual/Job Book
  - 2. Skill Qualification Tests (SQT)
  - 3. Army Training and Evaluation Program (ARTEP)
- D. INSTRUCTOR WITH STANDARD AIDS
  - 1. Class Packets
  - 2. Charts/Display Boards
  - 3. Overhead/Transparencies
  - 4. Models/Mockups
- E. AUDIO-ONLY
  - 1. TEC Audio-Only
  - 2. Language Labs (GEL)
- F. AUDIO VISUAL
  - 1. TEC Audio/Visual (BESELER CUE/SEE)
  - 2. Slides/Sound Slides
  - 3. Army Training Films
- G. TELEVISION/VIDEO RECORDING
  - 1. Classroom Closed-Circuit Television (CCTV)
  - 2. Television Trainer (TVT)
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  - 1. Operational TACFIRE PLANIT
  - 2. TACFIRE Training System (TTS)
  - 3. TACFIRE Subsystem Team Training (TSTT)
- J. TRAINING DEVICES/SIMULATORS
  - 1. Sand Table
  - 2. Fire Control Simulator BT-33
  - 3. Observed Fire Trainer (OFT)
  - 4. Artillery Direct Fire Trainer (ADFT)
  - 5. M-31 Field Artillery Trainer

K. Tactical Engagement Simulations (TES)

1. SCOPES
2. REALTRAIN (Exercise for Combined Arms Elements)
3. MILES

L. COMMAND/STAFF BATTLE SIMULATIONS

1. Tactical Exercise Without Troups (TEWTS)
2. CPX Simulation Facility
3. CAMMS (Computer Assisted Map Manuever System)
4. Combined Arms Tactical Training Simulator (CATTS)
5. FIRE FIGHT
6. DUNN KEMPF
7. PEGASUS
8. First Battle

### DEFINITIONS OF DATA BASE DESCRIPTORS

The categories of information contained in the Member Characteristics Table are as shown in Table 1 on the following page.

Each delivery system Member is described in a standard 9-page file format. Each Data Item carries a "Comment" line to further specify or qualify, as needed, the meaning of those data items checked. The organization of the Family and Member structure is reflected in the Table of Contents. The layout of the Member file is as shown in Table 2, presented on page 6.

Definitions of the factors, attributes, and data items used in the standard Member file format precede the data file and start on page 7. An example of each item in the Member file is included as an aid to interpreting the data base.



Table 1

## CATEGORICAL DEFINITIONS FOR FAMILY TABLE HEADINGS

<u>Category</u>	<u>Definition</u>
Member:	specifies the Delivery System
Training Method:	I - Individual Training C - Collective (team) Training
Training Level: <sup>a</sup>	specifies the highest level of training that is applicable to the delivery system.
Level 1	Job/Duty Function in Unit Organization
Level 2	Equipment/Tool Application to Unit Job/Duty
Level 3	Component Procedures-Duty Position
Level 4	Task Situational Practice-Duty Position
Level 5	Small Team Interaction-Situational
Level 6	Larger Team Interaction-Situational
Level 7	Multiple Unit-Situational
Level 8	Command Staff Interaction-Situational
Setting:	I - Institutional, U - Unit
Available Date:	the known or projected date when the delivery system is to be exportable to the unit level.
Acquisition and Courseware Costs:	The relative magnitude of costs estimated for the acquisition of the delivery system and the development of instructional materials, if applicable.  Magnitude ranges from: High (5, 4), Medium (3), Low (2, 1)
Presentation:	the presentation attributes of the delivery system:  V - Visual, A - Auditory, T - Tactile, S - Situational

<sup>a</sup>The entry in the table indicates the highest level(s) of duties and tasks for which the training delivery system can be applied. For further detail on training levels, see item L.N.3.1 in the delivery system Member files.

Table 2  
STRUCTURE OF MEMBER FILE

	<u>Index Code</u>	<u>Descriptors</u>
<u>Families</u>	(L)etter	A-Z
<u>Members</u>	(N)umber	1-n within family
<u>Selection Factors</u>	L.N.1	<u>SOURCE/PROPONENT</u>
	L.N.2	<u>DESCRIPTION</u>
	L.N.3	<u>TRAINING &amp; EVALUATION APPLICATIONS</u>
	L.N.4	:
<u>Delivery System</u>	L.N.3	<u>TRAINING &amp; EVALUATION APPLICATIONS</u>
<u>Attributes</u>	L.N.3.1	LEVEL OF TRAINING
	L.N.3.2	LEVEL OF EVALUATION
(Sequential, within Factors)	L.N.4	<u>CAPABILITIES</u>
	L.N.4.1	PRESENTATION
	L.N.4.2	RESPONSE
		:
<u>Data Items</u>	L.N.4.1	PRESENTATION
		a. Visual
		- Textual
		:
(Sequential, within Attributes)		- Motion
		- Color
		Etc.

## DATA BASE DESCRIPTORS

### Entry Code

(L)etter: FAMILY: Specifies a group of related delivery systems that have similar attributes. Family is the highest classification order in the data base.

Example: Training Devices/Simulators - See page 299. FAMILY J

(N)umber: MEMBER: Identifies a specific delivery system that is further defined within the data base.

Example: Fire Control Simulator (BT-33) - See page 310.

L.N.1 SOURCE/PROPONENT: Indicates where requests for or inquiry about status of the delivery system can be made. Which organization or agency is currently responsible for the development, use, or maintenance of the delivery system.

Example: Directorate of Training Developments  
(Simulator's Team) USAFAS - See page 310.

L.N.2 DESCRIPTION: Briefly describes the delivery system. Indicates the main components, how the system functions/operates, the users - trainees and support personnel, and operational availability status.

Example: The Swedish-made indoor simulator is for the training of artillery and mortar fire controllers. The BT-33 is an electronic training device capable of projecting various terrain scenes onto a panoramic screen and simulation artillery engagement of targets...

- See page 310.

L.N.3     TRAINING AND EVALUATION APPLICATIONS:   The sub-categories indicate how the delivery system may be used to meet training and evaluation situations.

Individual:   The delivery system is or can be used to train or evaluate the performance of an individual. Individual applications may be conducted in a group mode, but the focus of the application is not on team interaction skills. An instructor or facilitator may or may not be required.

Collective:   The delivery system is or can be used to train or evaluate performance of two or more individuals who must interact as a team to perform tasks that are required of the group as an entity. The individual tasks may be different, but are integrated toward a common goal; e.g., 155 mm (SP) Howitzer section conducts a registration mission.

Example:

X	Individual	Up to 25 students individually in group training mode.
X	Collective	Feasible if instructor simulates comm net recipient of call or a simulation position is added.

- See page 310.

L.N.3.1     LEVEL OF TRAINING:   Indicates one or more levels of individual-collective training requirements for which the delivery system is primarily suited. Subcategories include:



Unit Organization and Job Duties: The delivery system permits focusing the general operational job knowledges and skills acquired in BCT/AIT to the missions, echelons, communications, Regs, and SOPs governing operations in the soldier's specific unit job assignment (e.g., deployment, communications, and rules of engagement in specific unit geographic areas of responsibility).

Tool Applications to Unit Job Duties: The delivery system permits update and practice of basic skills in use of equipment, tools, aids, or references acquired in BCT/AIT for the specific job references and equipment configuration of the soldier's unit and job (e.g., the M113A1 maintenance skills acquired in school will need to be updated for an M113A1 configured with laser equipment to aid the Mounted Forward Observer).

Component Procedures: The delivery system permits presentation and practice of part-tasks so that the individual can perform a major task of the job/duty (e.g., initial, adjusting, and FFE calls as part-tasks of the fire direction task).

Task/Situational Practice: The delivery system permits presenting situational problems and individual practice responses for a major task of an individual's job duty. The equipment, manuals, aids and tools required for task accomplishment are provided. Situations are presented to provide experience that is required in the job/duty environment (e.g., obtaining laser range-finder readings under various combat conditions).

Small-Team: The delivery system permits realistic presentation of situational problems requiring integration of individual tasks into team tasks. Emphasis is upon the interaction of a few individuals within a team, crew or squad (e.g., interactions among members of the Fire Support Team).

Larger-Team: The delivery system permits realistic situational presentations requiring personnel to interact as a team at the platoon or company level. Several tasks may be integrated to accomplish a specific goal or function (e.g., mechanized infantry platoon in a scout mission).

Multi-unit: The delivery system must permit realistic situational presentations and interactions among lateral or vertical units. The interaction of individuals functioning in collective environments occurs, as does interplay among various organizational elements (e.g., unit coordination of anti-war and air-surface weapons employment).

Command Staff Exercise: A special condition in which the delivery system permits interactions among command staff personnel at different echelon levels so as to acquire and practice skills in troop leading, command-control procedures, and resources utilization decisions in tactical situations. The external environment is usually simulated with situations presented by controllers following a scenario which require interaction and decisions by the command staff participants. Individual and collective skills are practiced and procedures are subjected to evaluation and modification.

Example:

X Small-Team Feasible if instructor simulates comm net  
recipient of call or a simulation position is  
added.

- See page 311.

L.N.3.2 LEVEL OF EVALUATION: Indicates how the delivery system may be used to evaluate performance in individual or collective situations. Subcategories include:

Module Test: Tests a collection of sub-tasks which lead to evaluation of task accomplishment. Can be individual or collective tests.

Lesson Items: Tests specific objectives in a lesson which lead to evaluation of skill and knowledge acquisition. Can be individual or collective tests.

Individual Performance/SQT: Delivery system can be used for criterion-referenced assessment of individual skills and knowledges, or to assess job-task skill qualifications against standards. Subcategories are defined on the following page.

Written: The delivery system can be used to evaluate job tasks that require use of print materials and written responses (e.g., administrative or training management tasks), as well as tasks requiring mental abilities or decision making. Problems are presented in printed form. Responses are usually written but may take other forms such as oral, or keyed in using a terminal keyboard (computer-administered tests).

Hands On: The delivery system can be used to evaluate tasks that are performance oriented. The tasks are performed on actual job equipment or simulators in a realistic job setting (e.g., at a TACFIRE operator console in a Bn FDC field equipment configuration).



Performance Certification: The delivery system can be used to provide the soldier the opportunity to demonstrate that a task could be performed in the job situation, apart from a formal evaluation. The actual task is not tested in the job situation due to time, equipment, and other resource limitations (e.g., weapons proficiency certification as part of an annual exercise or tactical engagement simulation).

Team Exercise/ARTEP: Delivery system can be used to evaluate collective tasks or missions. Team tasks can range from a few individuals to multi-unit interactions.

Example:

X	Lesson Items	Individual placement of bursts by student are evaluated by instructor.

- See page 311.

L.N.4 CAPABILITIES: Indicates the capabilities of the delivery system for presentations, trainee response, and training management strategy.

L.N.4.1 PRESENTATION: Capabilities of the delivery system to present the stimulus (information, situational problem, instructions) to trainee. The subcategories are visual, auditory, and tactile.

a. Visual: Information presented to the eye.

Alphanumeric: Permits display and perception of information using standard alphanumeric characters (letters and numbers); e.g., textual instruction, message formats, etc.

Special Symbolology: Permits display and perception of information using non-textual characters and special symbols (e.g., situation map symbology).



2-D Graphics: Permits display in two dimensions, including 2-D representations of 3-D objects or events, using point-to-point line graphics (e.g., photographs, drawings, pictorials, schematics).

3-D Graphics: Permits display in three dimensions using height, depth and width characteristics (e.g., battle scene, mini-range).

Static Displays: Information can be presented in a fixed format for sustained viewing, or where apparent motion is not required (e.g., textual material, close-up of equipment detail).

Motion: Permits display of motion where required (e.g., moving target, drift of smoke from bursts).

Color: Permits display of color or flashing symbols to highlight or differentiate objects. Can be associated with static or motion displays (e.g., textual material, equipment panel lights).

b. Auditory: Information presented to the ear.

Signal/Tones: Permits display and perception of unique tones (e.g., audible alarms) or differences in pitch, loudness, or timbre (e.g., differentiating among signals).

Speech: Permits presentation of voice commands, reports and communication over intercoms, phone, radio, etc. (e.g., call for fire, SITREP, patrol reports).

c. Tactile: Information is presented to the touch.

Size/Shape: Permits perception of size, shape, or texture differences through sense of touch (e.g., non-visual location of controls on TACFIRE ACC).

Positional Cues: Permits tactile perception of changes in a physical display (e.g., position of rheostat, toggle switch, or steering wheel).

Example:

b. Auditory

<u>X</u>	Signals/Tones	<u>Machine-gun fire, firing pieces reports,</u>
—	Speech	<u>simulated bursts.</u>

- See page 311.

L.N.4.2 **RESPONSE:** Capabilities of the delivery system permitting trainees to practice the process and respond with results required by a performance-oriented training objective. Elements of the process may include informational, physical, attitudinal, mental or decision behaviors. Responses may be symbolic of actual actions, or may require actual (or simulated) performance.

- a. Verbal/Symbolic: Responses can demonstrate informational, mental, and decision skills. Physical or attitudinal responses are symbolic, short of actual task performance.

Choice Selection: Delivery system permits recognition and selection of a correct response from a group of alternatives presented (e.g., multiple choice, matching, and true/false).

Specific Recall: Permits trainee to recall and construct a particular response presented during training. Most recall responses can be given in written or oral forms (e.g., a formula, the elements in the call for fire). Some recall responses may be pictorial (e.g., drawing correct military map symbols).

Composed/Created: Permits the trainee to construct an appropriate response using his own choice of textual, oral, or pictorial descriptions (e.g., reporting on a recon patrol mission).

- b. Performance: Delivery system permits responding with actual or simulated actions required of an individual or team.

Indication: Permits a locating and pointing response (e.g., aiming a laser device at a target).

Manipulation: Permits a manual motor performance in response to a display or perceived requirement (e.g., adjusting fuel-air mixture in a carburetor, loading paper in the TACFIRE line printer).

Read/Interpret: Permits reading and comprehension of alphanumeric message text, mnemonics, and symbology as reflected by a subsequent response (e.g., process an incoming TACFIRE message displayed at the console, decode printed encrypted messages).

Listen/Interpret: Permits listening to and comprehension of tones, spoken commands, structural messages, and spoken phrases as reflected by a subsequent response (e.g., process voice call for fire from FO).

Voice Composition: Permits initiating oral communication with someone using English, encoded phrases, or mnemonics (e.g., FO gives an adjust fire request, patrol leader transmits an NBC report).

Situation Evaluation: Requires analysis of and drawing conclusions from information presented visually and/or orally as reflected by a subsequent choice or constructed response (e.g., assess intelligence inputs and prepare INTREP, determine distance to targets using a map).

Decide Action: Requires decision on next action or action sequence based upon choices available and/or situation analysis and evaluation as reflected by a subsequent choice or constructed response (e.g., select weapons, warhead and fuze based on vulnerability of target and friendly forces).



Example: b. Performance

X Listen/Intercept \_\_\_\_\_  
X Voice Composition Call for fire, adjustments.

- See page 312.

L.N.4.3 TRAINING MANAGEMENT: Capabilities and options of the delivery system for presenting performance feedback to the trainee, controlling the pace and sequencing of presentations, and keeping records on trainee actions.

- a. Feedback: Options for the type and immediacy of knowledge of performance results, prompting and tutorial help provided the trainee for responses made during training.

Informative: Ability to provide the correct response regardless of how or if the trainee actually responded.

Evaluative: Ability to give feedback indicating whether or not each response is correct.

Corrective: Ability to provide commentary on each response, particularly prompts or tutoring for an incorrect response. This assumes an Evaluative capability (above) also exists.

Summary: Ability to provide a summary of how trainee has responded to a series of presentations; e.g., end of module test, After-Action Review following an engagement simulation or ARTEP. This assumes a Recordkeeping capability (d, below) also exists.

Immediate: Feedback can occur immediately after the trainee has responded (e.g., after a recall answer, after after a console key action).

Delayed: Feedback to the trainee can occur at some time later after his responses (e.g., end of procedure drill, end of exercise).



- b. Presentation Control: Options available for control over rate of successive presentations to the trainee.

Learner: The presentation rate is self-paced, under control of the trainee. The presentation can be self-paced either with an intervening response (as in a PI text) or without responses (as in a standard textbook or job aid).

Media: The presentation rate of successive information is controlled by the media device or media courseware (e.g., standard training films, TEC audio-only tape cassette).

Instructor: The presentation rate of successive information is under the control of an instructor or device operator (e.g., lecture/conference, Observed Fire Trainer).

- c. Sequencing: Delivery system options for individualized control of successive information presentations or problems.

Linear: Ability to present a standard and required sequence of instructions and/or situational problems. Mastery of each may be a requirement before proceeding to the next successive unit (e.g., TEC audiovisual).

Response Branching: Ability to adjust successive instruction or problems in accordance with each response given, such as a response indicative of incorrect or incomplete understanding of prior material (e.g., TEC print branching PI text).

History Branching: Ability to adjust successive instruction or problems in accordance with the current response and a history of past responses and progress (e.g., CAI, CMI, or TACFIRE Training System).

Repetitive Practice: Ability to repeatedly present a class of situational or procedural problems until performed to a pre-determined proficiency standard (e.g., TACFIRE Training System, Observed Fire Trainer).

- d. Recordkeeping: Delivery system capabilities to record presentation and/or trainee response data.

Automatic (Temporary Storage): Records are automatically kept by the delivery system in a temporary storage area. These records may be used by the delivery system for real-time training decisions (e.g., branching and summary feedback). The information is normally output from the temporary storage area for subsequent use, or moved to a more permanent storage area (e.g., CAI student records on disk).

Automatic (Permanent Storage): Records are automatically retained by the delivery system for post-training use (e.g., videorecorder). Records may have to be processed before they are available in a useable form (e.g., CAI student records on tape).

Manual: Performance records are not automatically maintained by the delivery system, but methods are used to obtain data by manual means (e.g., monitor log).

None: The delivery system contains no apparent provisions, manual or automatic, for obtaining trainee performance records.

Example: a. Feedback

_____	Informative	_____
X	Evaluative	Gunnery instructor and bursts.

- See page 313.

L.N.5 SETTING: Indicates those areas where the deliver system may be employed. Major subcategories are Institutional or Unit.

Subcategory definitions include items L.N.5.1 through L.N.5.3 below.

L.N.5.1 INSTITUTIONAL: Indicates settings which are formally established to support or provide training, useable to large numbers of trainees. Trainees come to "institutional" locations, where training is usually conducted apart from the actual job setting. Institutional settings defined in TRADOC Reg. 350-100-1 (Draft), (dated April 1977), and included in this data base are as follows:

- Service School
- Army Training Center (ATC)
- Div/Post Installation Schools

Example:

Service School      USAFAS use only.

- See page 314.

L.N.5.2 UNIT: Indicates where the delivery system may be used at the unit level.

In-System (Embedded): The delivery system is either part of or adjunct to a fielded operational system (e.g., TACFIRE/PLANIT embedded training for BN FDC configuration).

Job Station: The delivery system can be used in the area or place where the soldier performs his job or function (e.g., ITDT Job Support Packages, job aids).

Individual Learning Center (ILC): Special area established for individual training delivery systems, usually in a self-study mode (e.g., TEC audiovisual).

Barracks/Home: Delivery system useful in an area where soldier resides apart from duty station (TEC programmed text, Ops/Intell correspondence courses).

Garrison Training Center: Areas established in the garrison for presentation of instructional material in an individual or group mode (e.g., classrooms, learning centers, dayrooms, motor pools).

Local Training Area: Permits limited maneuver space and sub-caliber or mini-range firing. Usually close to the unit.

Major Training Area: Large area that permits deployment and engagement of units as would occur in actual combat.

National Range: Similar to major training area. Can include joint forces usage.

Example:

Job Station

See page 314.

L.N.5.3 REQUIREMENTS: Indicates any special requirements imposed by the delivery system on the setting such as facility, space, power source, lighting, etc.

Example:

X

REQUIREMENTS:

Large, designated, permanent classroom. Needs 200V., 20 amps power source. Projection screen, two terrain view projectors, target projector, two or three burst projectors and main control unit.

See page 315.

L.N.6 EXPORTABILITY: Indicates availability of the delivery system at the unit level.

In Units: Delivery system is currently available to units.



Planning: Delivery system is planned to be made available to units.

No: Delivery system is not currently planned to be made available to units.

EXPORTABILITY:

\_\_\_ In Units \_\_\_ Planning X No Not easily transportable.  
USAFAS use only.

See page 315.

L.N.6.1 INITIAL OPERATIONAL CAPABILITY DATE: Indicates when the delivery system is planned to be operational at institutional and/or unit locations.

Currently Available: The delivery system is presently available for use at school or unit.

Future Date: Indicates date or time frame when delivery system is expected to be available for use in school and/or units.

Unknown: Information is not available or no known plans are evident as to making the delivery system operational.

Example: X Currently Available At USAFAS. No plans to export. Not  
easily transportable.

See page 315.

L.N.6.2 METHOD: Indicates how the delivery system may be obtained at the unit level.

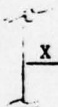
Mail/Ship: The instructional material can be received through mail channels from the distributing agency (e.g., correspondence courses).

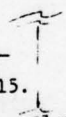
Install: The delivery system must be installed at the unit level. Can be hardware, software, or both (e.g., Observed Fire Trainer).

Remote Access (Telecommunications): The instructional material can be accessed through the use of telecommunications, e.g., interactive television systems, or remote terminal access to a computerized instructional system (e.g., PLANIT CAI at Edgewood Arsenal).

In System: The delivery system is part of or adjunct to a fielded operational system (e.g., TACFIRE/PLANIT embedded training).

Job Materials: The instructional materials are part of materials that are used in the job situation (e.g., ITDT Job Support Package).

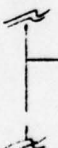
Example:  X Install \_\_\_\_\_

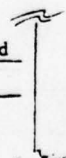
See page 315. 

L.N.6.3 BASIS OF ISSUE: Indicates how the delivery system and instructional material are issued at the unit level.

On Demand: Issued upon specific request from unit (e.g., Class Packets).

Unit Issue: Issue is established at higher headquarters (e.g., Beseler Cue-See for TEC program).

Example:  Unit Issue Per distribution plan. 8 Cue/See devices and  
4 viewing screens per Battalion.

See page 315. 

L.N.6.4 SOURCE: The organization or agency where the delivery system is located or controlled and requests must be sent from the unit level (e.g., ATSC). Different agencies may be sources (e.g., PM TRADE or TRADER for a device and the proponent schools for training materials needed to use the device).

Known: The source is known and indicated.

Probable: The source is assumed or judged to be as indicated.

Unknown: The source is not known.

Example: | X Known Issue: TRADOC Trng. Materials Detach. Tobyhanna, PA  
Lessons: Chief, Prod. & Dist. Trng. Programs Directorate,  
ATSC. Ft. Eustis, VA.

See page 315.

L.N.7 SUPPORT REQUIREMENTS: Indicates the type of support that is required to operate or maintain the delivery system. Subcategories include logistical, maintenance, and manning requirements. Special school operational support is also considered.

L.N.7.1 LOGISTICAL SUPPORT: Indicates the supply support that is required to sustain the delivery system in use.

Storage Areas: Indicates the need for storage areas to contain the delivery system, courseware, and support material. Can be enclosed or open areas (e.g., subcaliber devices for practice firing).

Space Parts: Indicates the requirement that additional parts be locally stored and available in support of the delivery system.

Additional Copies on Hand: Indicates the need to maintain additional copies of the delivery system devices or material on hand for subsequent use (e.g., class packets).

Expendable Material: Indicates that the instructional material is consumed as it is used (e.g., TEC print).

Example: | X Spare Parts Lamps, drive belts, slides.

See page 316.



L.N.7.2 MAINTENANCE REQUIREMENTS: Indicates is delivery system maintenance is required and, if so, the levels most likely required to sustain operation. This category includes only delivery system equipment or computer software, where this is part of the delivery system. Maintaining and updating delivery system courseware (e.g., sound-filmstrips, videotapes, CAI lesson data files) is covered by "Update" under 7.4 below.

Yes: Maintenance support is required (e.g., M-31 Field Artillery Trainer).

No: No known maintenance support requirement (e.g., TEC Print).

Operator: Necessary maintenance can be performed by the operator/user of the delivery system.

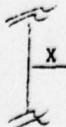
Organizational Maintenance: Maintenance support will be needed from the unit to which the delivery system is organic.

Direct Support Maintenance: Maintenance will normally be authorized and performed by designated maintenance activities in direct support of the user organization. Limited to the repair of end items or unserviceable assemblies on a return-to-user basis.

General Support Maintenance: Maintenance authorized and performed according to designated table of organization and table of distribution in support of the Army supply system. Concerns repair and overhaul of materiel to required maintenance standards in a ready-to-use condition.

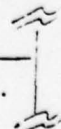
Depot Maintenance: Indicates maintenance to economically repair materiel by performing necessary overhaul. Provides for repair of materiel beyond general support maintenance.

Example:



Organizational Maintenance Gunnery operators.

See page 316.





L.N.7.3 MANNING REQUIREMENTS: Indicates the number and type of personnel (if any) that are required to operate, support or serve in an adjunct role in conjunction with training use of the delivery system.

Total = \_\_\_\_: The minimum number of training operations personnel required.

System Operators: Personnel who are required to operate all or portions of the delivery system (e.g., loading the TACFIRE/PLANIT system and data files for training use).

Instructors/Facilitators: The number of personnel required to function as instructors or facilitators as the delivery system is used (e.g., in using the Observed Fire Trainer).

Simulation/Monitor Positions: The number of personnel who are required to function in simulation or monitor positions as the delivery system is used (e.g., Simulation Controllers in Command Staff Battle Simulations).

Support Personnel: The number of additional personnel that may be required in support of the delivery system use.

Example: MANNING REQUIREMENTS: Total = 2  
X System Operators One

See page 316.

L.N.7.4 SCHOOL OPERATIONAL SUPPORT: Indicates any support that the development, implementation, and maintenance of the delivery system might require at the service school level (e.g., USAFAS course developers).

Special Personnel Skills: Those special personnel skills that may be required to support the delivery system (e.g., use of TV production facilities to produce or update CCTV tapes, use of the PLANIT language to encode or update CAI lessons).

Special Equipment: Any special equipment that may be required to support the delivery system (e.g., remote terminal devices for CAI).

Facility: Any special facilities that must be provided by the school to support the delivery system (e.g., CPX Simulation Exercising communications net and simulated TOC).

Reproduction: Indicates need for capability to reproduce material in support of the delivery system (e.g., class packets).

Update: Any additional capabilities that might be required of the school to be able to update (retrofit) the delivery system, especially associated training courseware, to meet necessary changes, additions, or modifications (e.g., frequent changes in technical or tactical doctrine).

Example: X Special Personnel Skills Instructor 13A  
See page 316.

L.N.8 COST DATE: Indicate the relative costs (actual or estimated) for system acquisition, operational use, and maintenance cost categories. Cost for training materials development is also considered. A dollar figure or relative magnitude for each category is used.

L.N.8.1 SYSTEM ACQUISITION: Relative magnitude or cost figures for acquiring the delivery system, excluding the development of training materials. Includes hardware, software, installation, or connect costs (if applicable).

High: Costs are greater than \$500K.  
Medium: Costs range between \$200-500K.  
Low: Costs are less than \$200K.  
None: Costs are unknown, do not apply, or do not exist.

Example: X Low

\$120K

See page 317.

L.N.8.2 CURRENT OR PROJECTED OPERATIONAL COSTS: Relative magnitude of costs to operate or use the delivery system for a stated period of time; each use, costs per hour, or other parameter as specified.

High: Costs are greater than \$1,000.

Medium: Costs range between \$500-1,000.

Low: Costs are less than \$500.

None: Costs are unknown, do not apply, or do not exist.

Example: X None

See page 317.

L.N.8.3 MAINTENANCE COSTS: Relative costs to maintain the delivery system for a given period of time (e.g., cost per unit per day or other parameter as specified).

High: Costs are greater than \$100.

Medium: Costs range between \$50-100.

Low: Costs are less than \$50.

None: Costs are unknown, do not apply, or do not exist.

Example: X Low

\$10,400 per year.

See page 317.

L.N.8.4 MATERIALS DEVELOPMENT/UPDATE: Relative costs for developing training materials apart from any hardware/software developmental or installation costs. Costs are given as dollar figures for developing an instructional unit (e.g., lesson, module) or as developmental ratios (developmental hours per training hour to validated product, excluding task analysis).



	<u>Dollar Values</u>	<u>Developmental Ratios</u>
<u>High:</u>	over \$20,000	over 150:1
<u>Medium:</u>	\$10,000-20,000	70:1 - 150:1
<u>Low:</u>	under \$10,000	under 70:1
<u>None:</u>	Costs are unknown, do not apply, or do not exist.	

Example: ☒ None

See page 317.

L.N.9 TRAINEE PREREQUISITES: Indicate if the delivery system itself, apart from a specific training application, places any special prerequisite demands on trainees to benefit from use of the delivery system; e.g., education, mental abilities, reading skills, specific aptitudes, physical strength, manual dexterity, MOS requirements, prior Army schools or training, etc.

Education: Indicates any education requirement that may be required (e.g., high school graduate, AIT, etc.).

Physical Skills: Indicates any motor skill that may be required to perform the job (e.g., drive a jeep, operate a winch).

Mental Skills: Indicates any cognitive requirements that may be required (e.g., must attain a specified verbal score, able to read at a specified level, etc.).

MOS Requirements: Indicates that specific MOS requirements must be met before trainee is considered for duty assignment (e.g., must be from 13E career field, skill level 4, etc.).

Aptitudes: Indicates that certain abilities (mechanical, verbal) are required as prerequisite to the duty assignment under consideration).



Schools/Courses: Indicates that certain schools and/or courses (e.g., map reading) are required before the trainee will be considered as a candidate for specific training or duty assignments.

Training: Indicates that specific areas of training (e.g., AIT) must be met before further consideration to a duty assignment or advancement is given.

Other: Indicates any additional prerequisites the trainee must meet.

None: Indicates that prerequisites are not required or are unknown for a duty assignment.

Example:

X

MOS Requirements

13E

See page 317.

L.N.10

ADDITIONAL COMMENT SHEET: Used to supply further information about the delivery system, or where extra space is required to continue a given heading.

FAMILY: A

JOB MATERIALS

Job materials are supportive materials that are developed and made available for use as the soldier performs specific tasks in a job-setting. They are usually printed materials that incorporate illustrations, tables, charts, graphs, etc., to present basic operations and maintenance procedures, as well as techniques that are necessary to successful task accomplishment within the job setting. Job materials are used for individual or collective (team) training and task accomplishment. The cost to produce job materials varies depending on the content and detail required. Keeping the documentation current is a major problem. There are several categories:

FMs are documents that cover procedures in the tactical use of equipment items or procedures to fulfill a tactical mission with the object system.

TMs are documents dealing with basic operation and maintenance of the object equipment/system. Types and formats are governed by appropriate Army Military Specs and Standards.

Integrated Technical Documentation and Training (ITDT) is a method to provide a job support package consisting of highly illustrated, simple-to-read technical manuals for Army materiel system operations and all maintenance levels (except depot) combined with fully compatible, performance-oriented training materials.

## MEMBER CHARACTERISTICS TABLE

FAMILY: A  
 MEMBER: 1

A	<u>FAMILY: JOB MATERIALS</u>	
1	<u>MEMBER: Field Manuals (FMs)</u>	
A.1.1	<u>SOURCE/PROPONENT:</u> Directorate, Combat Developments & Gunnery, Combined Arms, Tactics & Counterfire Depts, USAFAS, Source-AG publication supply channels.	
A.1.2	<u>DESCRIPTION:</u> <p>FMs are documents covering procedures in the tactical use of equipment items, such as sensors and weapons, or procedures required to fulfill a tactical mission with the object system, such as FA cannon gunnery. As such, they are one component of job-support training and evaluation delivery systems.</p> <p>FM 100-5 states the current concept of Army combat and tactical doctrine. It provides an Army-wide capstone for developing or integrating ARTEPs and specific operations FMs among the combined arms. It also provides guidance among combat developers of each branch; e.g., FA combined arms tactics, gunnery, counterfire. FM-100-5 cites relevant STANAGS and "How-to-Fight" manuals. The How-to-Fight manual FMs are organized into Capstone, Combat, Combat Support, and Special Operations categories. Each of these is further split into functional sets of FMs for soldier use.</p> <p>FMs are also used to tie performance-oriented training requirements to the tactical FMs and ARTEP manuals; e.g., FM 21-6 and the Commander's Manual/Soldier's Manual FMs designed for unit level training use. FMs are distributed through AG publication channels.</p>	
A.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	<u>COMMENTS</u>
	<u>X Individual</u>	<u>Limited to enabling tasks or subtasks. Individual/collective tactical operations in situational contexts is primary emphasis.</u>
	<u>X Collective</u>	<u>_____</u> <u>_____</u> <u>_____</u>



FAMILY: A

MEMBER: 1

A.1.3 TRAINING AND EVALUATION (CONT'D)

A.1.3.1 LEVEL OF TRAINING:

COMMENTS

<u>X</u> Unit Organization & Job Duties	FMs deal with enabling tasks or subtasks; e.g.; the Soldiers Manuals
<u>X</u> Tool Applications to Unit Job Duties	
<u>X</u> Component Procedures	
<u>X</u> Task/Situation Practice	
<u>X</u> Small-Team	Tactical FMs applied primarily at these levels
<u>X</u> Larger-Team	
<u>X</u> Multi-Unit	
<u>X</u> Command Staff Exercise	

A.1.3.2 LEVEL OF EVALUATION:

<u>X</u> Module Test	FMs may be adjunctive material for reference during training tests.
<u>X</u> Lesson Items	

FAMILY: A

MEMBER: 1

A.1.3.2	LEVEL OF EVALUATION (CONT'D)	COMMENTS
	<u>X</u> Individual Performance/SQT	<u>May require soldier knowledge of</u>
		<u>or reference to FM content.</u>
	<u>X</u> Written	
	<u>X</u> Hands-On	
	<u>X</u> Performance Certification	
	<u>X</u> Team Exercise/ARTEP:	<u>FMs provide mission basis, and may</u>
	Positions or echelons	<u>require soldier/evaluator references</u>
	interacting:	<u>Example: FIST, FDC, Firing Battery,</u>
		<u>Maneuver Company.</u>
A.1.4	<u>CAPABILITIES:</u>	
A.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	<u>Textual material.</u>
	<u>X</u> Special Symbolology	<u>Ops/Intell military symbols</u>
	<u>X</u> 2-D Graphics	<u>May depict 3-D; e.g., topography.</u>
	<u>    </u> 3-D Graphics	
	<u>X</u> Static Displays	
	<u>    </u> Motion	
	<u>X</u> Color	<u>Used increasingly in FMs.</u>
	b. Auditory	
	<u>    </u> Signals/Tones	
	<u>    </u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

FAMILY: A

MEMBER: 1

A.1.4.2 RESPONSE:		COMMENTS
a.	Verbal/Symbolic	
	<input type="checkbox"/> Choice Selection	
	<input type="checkbox"/> Specific Recall	
	<input type="checkbox"/> Composed/Created	
b.	Performance	
	<input type="checkbox"/> Indication	<u>FMs leave no built-in means of soldier</u>
	<input type="checkbox"/> Manipulation	<u>response. They can support job or</u>
	<input type="checkbox"/> Read/Interpret	<u>training performance responses as</u>
	<input type="checkbox"/> Listen/Interpret	<u>controlled by adjunctive materials.</u>
	<input type="checkbox"/> Voice Composition	
	<input type="checkbox"/> Situation Evaluation	
	<input type="checkbox"/> Decide Action	
A.1.4.3 TRAINING MANAGEMENT:		
a.	Feedback	<u>FMs have no built-in training Manage-</u>
	<input type="checkbox"/> Informative	<u>ment capabilities, except when supple-</u>
	<input checked="" type="checkbox"/> Evaluative	<u>mented as indicated below.</u>
	<input type="checkbox"/> Corrective	
	<input checked="" type="checkbox"/> Summary	<u>Mission After-Action Review</u>
	<input checked="" type="checkbox"/> Immediate	<u>Observed mission results and mission/</u>
	<input checked="" type="checkbox"/> Delayed	<u>post-mission reports on tactical actions.</u>
b.	Presentation Control	
	<input checked="" type="checkbox"/> Learner	<u>Soldier looks up info as required.</u>
	<input type="checkbox"/> Media	
	<input type="checkbox"/> Instructor	

FAMILY: A  
MEMBER: 1

A.1.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<u>X</u> Linear	<u>Except as used for direct reference</u>
	<u>    </u> Response Branching	<u>look-up by soldiers</u>
	<u>    </u> History Branching	
	<u>    </u> Repetitive Practice	
	d. Recordkeeping	
	<u>    </u> Automatic (Temporary Storage)	
	<u>    </u> Automatic (Permanent Storage)	
	<u>    </u> Manual	
	<u>X</u> None	<u>Except as supplemented by ARTEP,</u>
A.1.5	<u>SETTING:</u>	
A.1.5.1	<u>X</u> INSTITUTIONAL	
	<u>X</u> Service School	
	<u>X</u> Army Training Ctr (ATC)	
	<u>    </u> Div/Post Installation Schools	
A.1.5.2	<u>X</u> UNIT	
	<u>    </u> In-System (Embedded)	<u>Can be used anywhere, depending on</u>
	<u>X</u> Job-Station	<u>size, security classification, and</u>
	<u>X</u> Individual Learning Ctr (ILC)	<u>storage needs.</u>
	<u>X</u> Barracks/Home	
	<u>X</u> Garrison Training Area	
	<u>X</u> Local Training Area	
	<u>X</u> Major Training	
	<u>X</u> National Range	



FAMILY: A

MEMBER: 1

A.1.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Adequate and appropriate storage for reference when needed,</u>
		<u>including classified security control.</u>
A.1.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
A.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	
	<input checked="" type="checkbox"/> Future Date	<u>Future availability of "How-to-Fight"</u>
	<input type="checkbox"/> Unknown	<u>FMs is unknown.</u>
A.1.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input checked="" type="checkbox"/> Job Materials	
A.1.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	
	<input checked="" type="checkbox"/> Unit Issue	
A.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Normal AG publication supply channels.</u>
	<input type="checkbox"/> Probable	
	<input type="checkbox"/> Unknown	

FAMILY: A  
MEMBER: 1

A.1.7	<u>SUPPORT REQUIREMENTS:</u>	
A.1.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>X</u> Storage Areas	FM reference file, with classified control.
	<u>    </u> Spare Parts	
	<u>X</u> Additional Copies On Hand	Spare copies
	<u>    </u> Expendable Material	
A.1.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>    </u> Yes <u>X</u> No	Update at local/central levels (See
	<u>    </u> Operator	A.1.7.4).
	<u>    </u> Organizational Maintenance	
	<u>    </u> Direct Support Maintenance	
	<u>    </u> General Support Maintenance	
	<u>    </u> Depot Maintenance	
A.1.7.3	<u>MANNING REQUIREMENTS: Total = 2 minimum</u>	
	<u>    </u> System Operators	
	<u>    </u> Instructors/Facilitators	
	<u>    </u> Simulation/Monitor Positions	
	<u>X</u> Support Personnel	Publications control. Job supervisor assistance to users.
A.1.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> Special Personnel Skills	Access to combat developers/unit SMEs
	<u>    </u> Special Equipment	
	<u>X</u> Facility	Appropriate storage and control.
	<u>    </u> Reproduction	
	<u>X</u> Update	Requirement for technical/tactical doctrine update may range up to heavy.

FAMILY: AMEMBER: 1

	<u>COST DATA:</u>	<u>COMMENTS</u>
A.1.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Reproduction and distribution.</u>
	<input type="checkbox"/> None	
A.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Publications inventory control. May need</u>
	<input type="checkbox"/> None	<u>update to unit level, prior to reissues</u>
		<u>from central source.</u>
A.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	<u>(See A.1.8.4)</u>
A.1.8.4	MATERIALS DEVELOPMENT/UPDATE:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>No more than \$100/page to develop. Fre-</u>
	<input type="checkbox"/> None	<u>quent update/reissue may increase costs.</u>
A.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input checked="" type="checkbox"/> Mental Skills	<u>Some mental and reading skills required.</u>
	<input checked="" type="checkbox"/> MOS Requirements	<u>Dependent, in part, upon complexity of</u>
	<input checked="" type="checkbox"/> Aptitudes	<u>object item or system and tactical concept</u>
	<input checked="" type="checkbox"/> Schools/Courses	<u>of employment.</u>
	<input checked="" type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: A

MEMBER: 1

A.1 .10 ADDITIONAL COMMENTS SHEET:



FAMILY: A  
 MEMBER: 2

A	<u>FAMILY:</u> JOB MATERIALS										
2	<u>MEMBER:</u> Technical Manuals (TMs)										
A.2.1	<u>SOURCE/PROPONENT:</u> DARCOM for object equipment/material systems Normal AG publications channels; e.g., Maintenance Management Center (MMC), Lexington, KY.										
A.2.2	<p><u>DESCRIPTION:</u> TMs are documents dealing with basic operation and maintenance of the object equipment/system. As such, they are one component of job-support training and evaluation delivery systems. Types and formats are governed by appropriate Army Mil Specs and standards; for example, Operator through General Support levels of maintenance manuals.</p> <p>For a typical Army weapons system (e.g., a tank) there may be a voluminous number of TMs requiring extraordinary storage, and reference index. Technical update requirements may be severe. Units receive TMs when the object equipment/system is fielded.</p>										
A.2.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <table border="0"> <thead> <tr> <th></th> <th><u>COMMENTS</u></th> </tr> </thead> <tbody> <tr> <td><u>X</u> Individual</td> <td>Primary application is individual, equipment-oriented job support. Only if two or more personnel must coordinate to perform an equipment operation</td> </tr> <tr> <td><u>X</u> Collective</td> <td>or maintenance task.</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </tbody> </table>		<u>COMMENTS</u>	<u>X</u> Individual	Primary application is individual, equipment-oriented job support. Only if two or more personnel must coordinate to perform an equipment operation	<u>X</u> Collective	or maintenance task.				
	<u>COMMENTS</u>										
<u>X</u> Individual	Primary application is individual, equipment-oriented job support. Only if two or more personnel must coordinate to perform an equipment operation										
<u>X</u> Collective	or maintenance task.										

FAMILY: A  
MEMBER: 2

A.2.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
A.2.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>    </u> Unit Organization & Job Duties	<div></div> <div></div> <div></div>
	<u>X</u> Tool Applications to Unit Job Duties	<div>TMs used in job reference and equipment-oriented training.</div> <div></div>
	<u>X</u> Component Procedures	<div></div> <div></div> <div>↓</div>
	<u>X</u> Task/Situation Practice	Equipment-oriented coordination.
	<u>X</u> Small-Team	<div></div> <div></div> <div></div>
	<u>    </u> Larger-Team	<div></div> <div></div> <div></div>
	<u>    </u> Multi-Unit	<div></div> <div></div> <div></div>
	<u>    </u> Command Staff Exercise	<div></div> <div></div>
A.2.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<div>TMs may be adjunctive material for reference during training tests.</div> <div></div>
	<u>X</u> Lesson Items	<div></div> <div></div> <div>↓</div>

FAMILY: A

MEMBER: 2

A.2.3.2	LEVEL OF EVALUATION (CONT'D)	COMMENTS
	<input checked="" type="checkbox"/> Individual Performance/SQT	TMs may be required for use in performance test or SQT.
	<input type="checkbox"/> Written	
	<input checked="" type="checkbox"/> Hands-On	
	<input checked="" type="checkbox"/> Performance Certification	
	<input checked="" type="checkbox"/> Team Exercise/ARTEP:	May be used during team equipment tasks.
	Positions or echelons interacting:	Equipment/system operator/crew, and maintenance teams.
A.2.4	CAPABILITIES:	
A.2.4.1	PRESENTATION:	
	a. Visual	
	<input checked="" type="checkbox"/> Alphanumeric	Per TM Mil Specs and standards.
	<input checked="" type="checkbox"/> Special Symbolology	Diagrams and schematics.
	<input checked="" type="checkbox"/> 2-D Graphics	
	<input type="checkbox"/> 3-D Graphics	
	<input checked="" type="checkbox"/> Static Displays	
	<input type="checkbox"/> Motion	
	<input type="checkbox"/> Color	Rarely used.
	b. Auditory	
	<input type="checkbox"/> Signals/Tones	
	<input type="checkbox"/> Speech	
	c. Tactile	
	<input type="checkbox"/> Size/Shape	
	<input type="checkbox"/> Positional Cues	

FAMILY: A  
MEMBER: 2

A.2.4.2 RESPONSE:		COMMENTS
a. Verbal/Symbolic		
<input type="checkbox"/> Choice Selection		
<input type="checkbox"/> Specific Recall		
<input type="checkbox"/> Composed/Created		
b. Performance		
<input type="checkbox"/> Indication		TMs have no built-in means of soldier
<input type="checkbox"/> Manipulation		response. They can support job or
<input type="checkbox"/> Read/Interpret		training performance response as
<input type="checkbox"/> Listen/Interpret		controlled by adjunctive materials.
<input type="checkbox"/> Voice Composition		
<input type="checkbox"/> Situation Evaluation		Fault isolation and troubleshooting.
<input type="checkbox"/> Decide Action		↓
A.2.4.3 TRAINING MANAGEMENT:		No inherent capability.
a. Feedback		
<input type="checkbox"/> Informative		TMs may or may not contain cues and
<input checked="" type="checkbox"/> Evaluative		standards to discriminate correct/
<input checked="" type="checkbox"/> Corrective		incorrect actions. Supported by
<input type="checkbox"/> Summary		job supervisor feedback, soldiers
<input checked="" type="checkbox"/> Immediate		observed results of equipment actions,
<input checked="" type="checkbox"/> Delayed		or SQT/ARTEP results.
b. Presentation Control		
<input checked="" type="checkbox"/> Learner		Soldier looks up data as required.
<input type="checkbox"/> Media		
<input type="checkbox"/> Instructor		



MEMBER: 2

## COMMENTS

<u>X</u> Linear	Linear except no used for direct
<u>X</u> Response Branching	look-up by soldiers, as guided by
<u>History Branching</u>	the procedure in the TM, or by job
<u>Repetitive Practice</u>	supervisor instructions.

_____	Automatic (Temporary Storage)	_____
_____	Automatic (Permanent Storage)	_____
<u>X</u>	Manual	<u>As required by the TM and unit SOP.</u>
<u>X</u>	None	<u>Except as supplemented by job-aids and forms, Job Books/Job Cards, etc.</u>

A.2.5.1	X	INSTITUTIONAL
---------	---	---------------

X Service School \_\_\_\_\_  
X Army Training Ctr (ATC) \_\_\_\_\_  
X Div/Post Installation Unit (I)nstitutional  
Schools \_\_\_\_\_

<u>X</u>	In-System (Embedded)	TMs are intended to be used with
<u>X</u>	Job-Station	the object equipment/system, what-
___	Individual Learning Ctr (ILC)	ever its location.
___	Barracks/Home	
<u>X</u>	Garrison Training Area	
<u>X</u>	Local Training Area	
<u>X</u>	Major Training	
<u>X</u>	National Range	

FAMILY: A  
MEMBER: 2

A.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Equipment/system related. Adequate and appropriate storage</u>
		<u>for ready access when needed, including classified inventory</u>
		<u>control.</u>
A.2.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
A.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u>Procured with equipment and Army</u>
	<input type="checkbox"/> Future Date	<u>materiel systems.</u>
	<input type="checkbox"/> Unknown	
A.2.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input checked="" type="checkbox"/> Job Materials	
A.2.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u>Normal AG publication supply channels</u>
	<input checked="" type="checkbox"/> Unit Issue	<u>Sent with equipment.</u>
A.2.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>DARCOM Maintenance Management Center</u>
	<input type="checkbox"/> Probable	<u>(MMC), Lexington, KY</u>
	<input type="checkbox"/> Unknown	

FAMILY: A

MEMBER: 2

A.2.7	<u>SUPPORT REQUIREMENTS:</u>	<u>COMMENTS</u>
A.2.7.1	LOGISTICAL SUPPORT:	
	<u>X</u> Storage Areas May be large.	TM reference file, with classified
	<u>X</u> Spare Parts	control spare copies.
	<u>    </u> Additional Copies On Hand	
	<u>    </u> Expendable Material	
A.2.7.2	MAINTENANCE REQUIREMENTS:	
	<u>    </u> Yes <u>X</u> No	Update at local/centered levels
	<u>    </u> Operator	(see A.2.7.4).
	<u>    </u> Organizational Maintenance	
	<u>    </u> Direct Support Maintenance	
	<u>    </u> General Support Maintenance	
	<u>    </u> Depot Maintenance	
A.2.7.3	MANNING REQUIREMENTS: Total = <u>2</u> minimum	
	<u>    </u> System Operators	
	<u>    </u> Instructors/Facilitators	
	<u>    </u> Simulation/Monitor Positions	
	<u>X</u> Support Personnel	Publications control. Job
		supervisor assistance to users.
A.2.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<u>X</u> Special Personnel Skills	Use of object equipment for DT/OT
	<u>X</u> Special Equipment	and school-unit transition training.
	<u>X</u> Facility	Appropriate storage and control.
	<u>    </u> Reproduction	
	<u>X</u> Update	Req't may be heavy for technical
		changes.

FAMILY: A  
MEMBER: 2

A.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
A.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Sunk in equipment placement costs, except
	<input type="checkbox"/> None	reproduction and distribution.
A.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Publications inventory control. Updates
	<input type="checkbox"/> None	at unit level, before reissues from
		central source.
A.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	(see A.2.3.4).
A.2.8.4	TRAINING MATERIALS DEVELOPMENT/UPDATE:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Approx. \$100/page to develop. Frequent
	<input type="checkbox"/> None	update/reissue may increase costs.
A.2.9	TRAINEE PREREQUISITES:	
	<input type="checkbox"/> Education	Variable, according to object equipment/
	<input checked="" type="checkbox"/> Physical Skills	system. Some mental and reading skills
	<input checked="" type="checkbox"/> Mental Skills	required. Depends, in part, on complexity
	<input checked="" type="checkbox"/> MOS Requirements	of object equipment/system and design of TMs
	<input checked="" type="checkbox"/> Aptitudes	for combined verbal-pictorial comprehension.
	<input checked="" type="checkbox"/> Schools/Courses	
	<input checked="" type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	



FAMILY: AMEMBER: 2

A.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
A.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Sunk in equipment placement costs, except
	<input type="checkbox"/> None	reproduction and distribution.
A.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Publications inventory control. Updates
	<input type="checkbox"/> None	at unit level, before reissues from
		central source.
A.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	(see A.2.8.4).
A.2.8.4	TRAINING MATERIALS DEVELOPMENT/UPDATE:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Approx. \$100/page to develop. Frequent
	<input type="checkbox"/> None	update/reissue may increase costs.
A.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	Variable, according to object equipment/
	<input checked="" type="checkbox"/> Physical Skills	system. Some mental and reading skills
	<input checked="" type="checkbox"/> Mental Skills	required. Depends, in part, on complexity
	<input checked="" type="checkbox"/> MOS Requirements	of object equipment/system and design of TMs
	<input checked="" type="checkbox"/> Aptitudes	for combined verbal-pictorial comprehension.
	<input checked="" type="checkbox"/> Schools/Courses	
	<input checked="" type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: A  
 MEMBER: 3

A	<u>FAMILY:</u> JOB SUPPORT MATERIALS						
3	<u>MEMBER:</u> ITDT Technical Manuals						
A.3.1	<u>SOURCE/PROPONENT:</u> DARCOM Program Manager and TRADOC System Manager for developing systems. Army distribution channels for a fielded system; e.g., MMC for TMs and ATSC for training materials. Evolutionary.						
A.3.2	<p><u>DESCRIPTION:</u> The ITDT (Integrated Technical Documentation and Training) job support package consists of highly illustrated, simple to read technical manuals for Army material system operators and all maintenance levels (except Depot) combined with fully compatible, performance-oriented training materials. ITDT Technical Manuals communicate the "what" and "how to" of each essential equipment item/system maintenance and operating procedure in understandable and usable form.</p> <p>Operator/crew training under the ITDT concept specifically <u>excludes</u> tactical employment duties and tasks of the materiel system (DARCOM/TRADOC Joint Policy Statement on ITDT, August, 1977). Basic operating tasks such as starting/energizing, stopping/deenergizing, as well as operating tasks performed in the course of material maintenance will be <u>included</u>. In general, the training is presented in a self-paced, exportable form for use in unit environments. The preferred media will be standard print; however, the training component of an ITDT package may employ other delivery systems suitable for equipment-oriented maintenance and operator training (e.g., TEC audio-only, system-embedded training devices/simulators, or computer mediated training in computer-based object systems) as specifically authorized by the procuring activity.</p> <p style="text-align: right;">(Continued on next page)</p>						
A.3.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <table border="0" style="width: 100%;"> <thead> <tr> <th style="width: 20%;"></th> <th style="width: 10%; text-align: center;"><u>COMMENTS</u></th> </tr> </thead> <tbody> <tr> <td><u>X</u> Individual</td> <td>Self-paced, stand-alone training methods using TM as basic reference.</td> </tr> <tr> <td><u>X</u> Collective</td> <td>Small groups/teams for non-tactical, equipment oriented tasks using TM as basic reference.</td> </tr> </tbody> </table>		<u>COMMENTS</u>	<u>X</u> Individual	Self-paced, stand-alone training methods using TM as basic reference.	<u>X</u> Collective	Small groups/teams for non-tactical, equipment oriented tasks using TM as basic reference.
	<u>COMMENTS</u>						
<u>X</u> Individual	Self-paced, stand-alone training methods using TM as basic reference.						
<u>X</u> Collective	Small groups/teams for non-tactical, equipment oriented tasks using TM as basic reference.						

FAMILY:           A          

MEMBER:           3          

A.3.2

DESCRIPTION (Cont.)

To ensure unit usability, the ITDT manuals training support component includes Student and Training Management Guides for course modules, Student Sheets and Administrative Instructions for each lesson, and lesson content materials or reference to Technical Manuals and other applicable materials.

FAMILY: A  
 MEMBER: 3

A.3.3 <u>TRAINING AND EVALUATION (CONT'D)</u>	
A.3.3.1 LEVEL OF TRAINING:	<u>COMMENTS</u>
<u>X</u> Unit Organization & Job Duties	TMs and integrated training component use on job and job-oriented individual training.
<u>X</u> Tool Applications to Unit Job Duties	
<u>X</u> Component Procedures	
<u>X</u> Task/Situation Practice	
<u>X</u> Small-Team	Interactive maintenance and operator tasks requiring coordination.
<u>    </u> Larger-Team	
<u>    </u> Multi-Unit	
<u>    </u> Command Staff Exercise	
A.3.3.2 LEVEL OF EVALUATION:	
<u>X</u> Module Test	Users will reference ITDT manuals during tests required by the training component.
<u>X</u> Lesson Items	



FAMILY: A  
MEMBER: 3

A.3.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	Manuals & job aids may be required for performance test or SQT
	<u>    </u> Written	
	<u>X</u> Hands-On	
	<u>X</u> Performance Certification	
	<u>X</u> Team Exercise/ARTEP: Positions or echelons interacting:	May be used during team equipment tasks. System operator/crew, equipment. Maintenance teams.
A.3.4	<u>CAPABILITIES:</u>	
A.3.4.1	<u>PRESENTATION:</u>	
	a. Visual	Per ITDT Mil. Spec design requirements for manuals.
	<u>X</u> Alphanumeric	
	<u>X</u> Special Symbolology	Wiring Diagrams, Schematics.
	<u>X</u> 2-D Graphics	
	<u>    </u> 3-D Graphics	
	<u>X</u> Static Displays	
	<u>    </u> Motion	
	<u>X</u> Color	If specified by procuring activity.
	b. Auditory	
	<u>    </u> Signals/Tones	
	<u>    </u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

FAMILY: A  
MEMBER: 3

A.3.4.2 RESPONSE:

### COMMENTS

- a. Verbal/Symbolic

\_\_\_ Choice Selection  
\_\_\_ Specific Recall  
\_\_\_ Composed/Created

- b. Performance

Indication	ITDT TMs will self-direct soldier
Manipulation	performance, as supported by training
Read/Interpret	management materials of the total ITDT
Listen/Interpret	package.
Voice Composition	
Situation Evaluation	Fault isolation and troubleshooting.
Decide Action	

#### A.3.4.3 TRAINING MANAGEMENT:

- ### a. Feedback

<u>    </u> Informative	<u>Supported by training and training manage-</u>
<u>X</u> Evaluative	<u>ment components of ITDT package. Also, job</u>
<u>X</u> Corrective	<u>supervisor feedback, soldier observed</u>
<u>    </u> Summary	<u>results of equipment actions, and SQT/ARTED</u>
<u>X</u> Immediate	<u>results.</u>
<u>X</u> Delayed	

- b. Presentation Control**

<u>X</u> Learner (Soldier look-up)	<u>Manuals of the ITDT package.</u>
<u>X</u> Media	<u>Design &amp; indexing of procedures, as well as</u>
<u>  </u> Instructor	<u>the training delivery system and management</u> <u>components of the ITDT package.</u>

FAMILY: A  
MEMBER: 3

A.3.5.3	<input checked="" type="checkbox"/> REQUIREMENTS: <u>COMMENTS</u> <u>Equipment/system unique. Adequate and appropriate storage</u> <u>of manuals and training packages for access when needed, includ-</u> <u>ing classified inventory control.</u>
A.3.6	<u>EXPORTABILITY:</u> <input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No <u>Various development or planning</u> <u>stages for a number of systems.</u>
A.3.6.1	INITIAL OPERATIONAL CAPABILITY DATE: <input checked="" type="checkbox"/> Currently Available <u>Developmental drafts for TACFIRE, tank</u> <input checked="" type="checkbox"/> Future Date <u>turret, wheeled vehicles, and Battery</u> <input type="checkbox"/> Unknown <u>Computer System. Other systems in</u> <u>accordance with ITDT retrofit or</u> <u>life-cycle developmental schedules.</u>
A.3.6.2	METHOD: <input checked="" type="checkbox"/> Mail/Ship <u>Most components of ITDT package.</u> <input checked="" type="checkbox"/> Install <u>System-embedded simulation practice.</u> <input checked="" type="checkbox"/> Remote Access (Telecommunications) <u>No firm plans; e.g., informa-</u> <input type="checkbox"/> In System <u>tion retrieval to central maintenance file.</u> <input checked="" type="checkbox"/> Job Materials <u>_____</u>
A.3.6.3	BASIS OF ISSUE: <input checked="" type="checkbox"/> On Demand <u>Normal AG publication supply channels.</u> <input checked="" type="checkbox"/> Unit Issue <u>Sent with equipment.</u>
A.3.6.4	SOURCE: <input type="checkbox"/> Known <u>DARCOM system procurement agencies, MMC,</u> <input checked="" type="checkbox"/> Probable <u>ATSC, etc. Evolving.</u> <input type="checkbox"/> Unknown <u>_____</u>

FAMILY: A

MEMBER: 3

A.3.7	<u>SUPPORT REQUIREMENTS:</u>	
A.3.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Goal = no more than three times that</u>
	<input type="checkbox"/> Spare Parts	<u>required for TMs &amp; spare copies now.</u>
	<input checked="" type="checkbox"/> Additional Copies On Hand	<u>Portions of training support package.</u>
	<input checked="" type="checkbox"/> Expendable Material	<u></u>
A.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u>Update at local/central levels</u>
	<input type="checkbox"/> Operator	<u>(See A.3.7.4).</u>
	<input type="checkbox"/> Organizational Maintenance	<u></u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
A.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>2</u> Minimum</u>	
	<input type="checkbox"/> System Operators	<u>Depends on design of ITDT training</u>
	<input type="checkbox"/> Instructors/Facilitators	<u>support package/devices.</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u></u>
	<input checked="" type="checkbox"/> Support Personnel	<u>Publications control. User assistance</u>
A.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>ITDT Mil Specs and life-cycle actions.</u>
	<input checked="" type="checkbox"/> Special Equipment	<u>DARCOM PM/TRADOC SM coordination. Use</u>
	<input checked="" type="checkbox"/> Facility	<u>of system for DT/OT and school-unit</u>
	<input type="checkbox"/> Reproduction	<u>transition training. Appropriate</u>
	<input checked="" type="checkbox"/> Update	<u>storage and control. Requirement may</u>
		<u>be for heavy for technical changes.</u>



FAMILY: A

MEMBER: 3

A.3.7.3 MANNING REQUIREMENTS: (Cont'd)

supervisor/training manager in accordance with ITDT training management components.

FAMILY: AMEMBER: 3

A.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
A.3.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Sunk in equipment procurement costs except reproduction and distribution.
	<input type="checkbox"/> None	
A.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	Depends on nature of ITDT package.
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Publications inventory control. Updates at unit level, before reissues from central source.
	<input type="checkbox"/> None	
A.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	(See A.3.8.4)
A.3.8.4	TRAINING MATERIALS DEVELOPMENT/UPDATE:	
	<input type="checkbox"/> High	Approx \$120/page to develop.
	<input checked="" type="checkbox"/> Medium	As for TMs, with the addition of ITDT training components.
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
A.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	Variable per object equipment/system.
	<input checked="" type="checkbox"/> Physical Skills	Depends, in part, on complexity of system and design of materials. Job duty novice/apprentice entry levels. 5-6th grade level of combined verbal-pictorial comprehension. AIT completed.
	<input checked="" type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	
	<input checked="" type="checkbox"/> Aptitudes	
	<input checked="" type="checkbox"/> Schools/Courses	
	<input checked="" type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: A  
MEMBER: 2

A.3.10 ADDITIONAL COMMENTS SHEET:

## PRINTED MATERIALS

Printed materials are the most common means of presenting instruction in an individualized or self-study mode. TEC print are self-paced, interactive, individualized and performance oriented materials that include programmed texts and illustrated job aids. The specific selection of TEC lesson design depends upon the tasks to be taught. The design usually includes textual material which is augmented by illustrations, examples, and practice exercises. Each TEC lesson includes a pretest by which the student can determine whether he needs to take the lesson. Major advantages of TEC print is that the material is organized and task related; learning is more efficient than with standard text material, each individual progresses at his own pace, in keeping with his mastery of the materials, and is highly exportable to different settings. Major disadvantages, compared to standard texts, include the time and costs of development and difficulty in using for reference.

Correspondence courses are designed for individual or group mode usage and include a number of subcourses that are interrelated. A subcourse is the basic instructional unit. The course usually covers one subject area. The instructional material is presented in standard text format and may include practice exercises that use charts, tables, maps, overlays, tools and equipment, etc., as supplementary materials. Student courses require no personnel support as they are student-requested and self-completed and graded by the administering school. Group oriented lessons, require at least one instructor. A correspondence course contains administrative instructions for student use, as well as instructions to the instructor when applicable. Correspondence courses are designed to cover a broad spectrum of the student population and, therefore, may not meet every individual training need.



FAMILY: B

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FAMILY: B

MEMBER: 1

B	<u>FAMILY:</u> PRINTED MATERIAL															
1	<u>MEMBER:</u> TEC Print															
B.1.1	<u>SOURCE/PROPONENT:</u> Director, Course Development & Trng., USAFAS. Initial Issue: TRADOC Trng. Material Support Detach., Tobyhanna, PA. Copies: Chief, Production & Dist., Trng. Program Directorate, ATSC,															
B.1.2	<u>DESCRIPTION:</u> Ft. Eustis, VA  TEC is a series of service school produced lessons designed to provide Active Army and Reserve Component commanders with additional capability to upgrade individual training and MOS proficiency in their units. The lessons are self-contained and concentrate on preparing soldiers to perform specific tasks required by their jobs.  An important feature of TEC is that each lesson includes a pretest. By taking the pretest, a soldier can determine beforehand whether he needs the lesson. This pretest feature permits soldiers to concentrate their time and effort only in those areas where they need further training. Because TEC permits soldiers to study at their own pace, it is an ideal system for soldiers who want to improve their MOS proficiency or to cross train in another MOS. It also provides an excellent system to conduct remedial or make-up training.  TEC printed materials include programmed texts and illustrated job aids. The specific selection of the TEC lesson format depends on the tasks to be taught. Accordingly, some subjects use a combination of TEC formats.  The TEC series was originally prepared for soldiers in infantry, armor, field artillery and air defense units. Over 600 other lessons were then developed for soldiers in various other MOS including combat support and combat service support units. One facilitator, to act as librarian, is required for TEC print use. Lessons can be obtained through ATSC.															
B.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>  <table border="0"> <tr> <td><u>X</u> Individual</td> <td>Totally self-paced and keyed to soldier's manual</td> </tr> <tr> <td></td> <td><u>tasks.</u></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td><u>Collective</u></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	<u>X</u> Individual	Totally self-paced and keyed to soldier's manual		<u>tasks.</u>					<u>Collective</u>						<u>COMMENTS</u>          
<u>X</u> Individual	Totally self-paced and keyed to soldier's manual															
	<u>tasks.</u>															
<u>Collective</u>																

FAMILY: B  
MEMBER: 1

B.1.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
B.1.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Unit Organization & Job Duties	<u>Cover a wide variety of skills.</u> <u>Depends on task being trained.</u>
	<input checked="" type="checkbox"/> Tool Applications to Unit Job Duties	
	<input checked="" type="checkbox"/> Component Procedures	
	<input type="checkbox"/> Task/Situation Practice	
	<input type="checkbox"/> Small-Team	
	<input type="checkbox"/> Larger-Team	
	<input type="checkbox"/> Multi-Unit	
	<input type="checkbox"/> Command Staff Exercise	
B.1.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Each lesson has a pre-test.</u>
	<input checked="" type="checkbox"/> Lesson Items	<u>May have embedded test items</u> <u>within lesson material.</u>

FAMILY: B

MEMBER: 1

B.1.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Individual Performance/SQT	
	<input checked="" type="checkbox"/> Written	<u>Pre-test provided.</u>
	<input checked="" type="checkbox"/> Hands-On	<u>Used in conjunction with hands-on performance assessment.</u>
	<input type="checkbox"/> Performance Certification	
	<input type="checkbox"/> Team Exercise/ARTEP:	
	<input type="checkbox"/> Positions or echelons interacting:	
B.1.4	<u>CAPABILITIES:</u>	
B.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<input checked="" type="checkbox"/> Alphanumeric	<u>Whatever characters that can be provided</u>
	<input checked="" type="checkbox"/> Special Symbolology	<u>in printed form.</u>
	<input checked="" type="checkbox"/> 2-D Graphics	
	<input type="checkbox"/> 3-D Graphics	
	<input checked="" type="checkbox"/> Static Displays	
	<input type="checkbox"/> Motion	
	<input checked="" type="checkbox"/> Color	<u>Some added occasionally.</u>
	b. Auditory	
	<input type="checkbox"/> Signals/Tones	
	<input type="checkbox"/> Speech	
	c. Tactile	
	<input type="checkbox"/> Size/Shape	
	<input type="checkbox"/> Positional Cues	



FAMILY: B  
MEMBER: 1

B.1.4.2 RESPONSE:

COMMENTS

a. Verbal/Symbolic

- ☒ Choice Selection
- ☒ Specific Recall
- ☒ Composed/Created

As required by instructional material.

b. Performance

- ☐ Indication
- ☐ Manipulation
- ☒ Read/Interpret
- ☐ Listen/Interpret
- ☐ Voice Composition
- ☒ Situation Evaluation
- ☒ Decide Action

As required by instructional material.

B.1.4.3 TRAINING MANAGEMENT:

a. Feedback

- ☒ Informative
- ☒ Evaluative
- ☒ Corrective
- ☐ Summary
- ☒ Immediate
- ☒ Delayed

As contained within printed materials.

b. Presentation Control

- ☒ Learner
- ☐ Media
- ☐ Instructor

Self-paced.

FAMILY: B

MEMBER: 1

B.1.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

c. Sequencing

- ☒ Linear As provided within the instructional
- ☒ Response Branching material.
- ☐ History Branching
- ☒ Repetitive Practice

d. Recordkeeping

- ☐ Automatic (Temporary Storage)
- ☐ Automatic (Permanent Storage)
- ☒ Manual Only when required.
- ☐ None

B.1.5 SETTING:

B.1.5.1 ☒ INSTITUTIONAL

- ☒ Service School Army learning environment.
- ☒ Army Training Ctr (ATC)
- ☒ Div/Post Installation Schools

B.1.5.2 ☒ UNIT

- ☐ In-System (Embedded) Army learning environment.
- ☒ Job-Station
- ☒ Individual Learning Ctr (ILC)
- ☒ Barracks/Home
- ☒ Garrison Training Area
- ☐ Local Training Area
- ☐ Major Training
- ☐ National Range

FAMILY: B  
 MEMBER: 1

B.1.5.3	<u>REQUIREMENTS:</u> <u>Work space to study material.</u>   	<u>COMMENTS</u>
B.1.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
B.1.6.1	<u>INITIAL OPERATIONAL</u>	
	<u>CAPABILITY DATE:</u>	
	<input checked="" type="checkbox"/> Currently Available	
	<input type="checkbox"/> Future Date	
	<input type="checkbox"/> Unknown	
B.1.6.2	<u>METHOD:</u>	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
B.1.6.3	<u>BASIS OF ISSUE:</u>	
	<input type="checkbox"/> On Demand	
	<input checked="" type="checkbox"/> Unit Issue <u>Pinpoint distribution.</u>	
B.1.6.4	<u>SOURCE:</u>	
	<input checked="" type="checkbox"/> Known <u>Issue: TRADOC Trng. Materials Detach.,</u>	
	<input type="checkbox"/> Probable <u>Tobyhanna, PA</u>	
	<input type="checkbox"/> Unknown <u>Lessons: Chief, Prod. &amp; Dist., Trng.</u>	
	<u>Programs Directorate, ATSC, Ft. Eustis, VA</u>	

FAMILY: B

MEMBER: 1

B.1.7	<u>SUPPORT REQUIREMENTS:</u>	
B.1.7.1	LOGISTICAL SUPPORT:	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Store printed materials.</u>
	<input type="checkbox"/> Spare Parts	<u></u>
	<input checked="" type="checkbox"/> Additional Copies On Hand	<u>Can maintain local supply.</u>
	<input checked="" type="checkbox"/> Expendable Material	<u>Individual copies issued to trainee.</u>
B.1.7.2	MAINTENANCE REQUIREMENTS:	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u></u>
	<input type="checkbox"/> Operator	<u></u>
	<input type="checkbox"/> Organizational Maintenance	<u></u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
B.1.7.3	MANNING REQUIREMENTS: Total = <u>1</u>	
	<input type="checkbox"/> System Operators	<u></u>
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>One unit level facilitator as librarian.</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u></u>
	<input type="checkbox"/> Support Personnel	<u></u>
B.1.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input type="checkbox"/> Special Personnel Skills	<u></u>
	<input type="checkbox"/> Special Equipment	<u></u>
	<input type="checkbox"/> Facility	<u></u>
	<input type="checkbox"/> Reproduction	<u></u>
	<input checked="" type="checkbox"/> Update	<u>Replacements distributed through normal TEC channels.</u>



FAMILY: BMEMBER: 1

B.1.8	COST DATA:	COMMENTS
B.1.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	<u>See Training Materials Development.</u>
	<input type="checkbox"/> Medium	<u>B.1.3.4.</u>
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
B.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Per user session.</u>
	<input type="checkbox"/> None	
B.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Per user session.</u>
	<input type="checkbox"/> None	
B.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	<u>2-3K/30-120 minute lesson; 40:1</u>
	<input type="checkbox"/> Medium	<u>(developmental hours: one lesson).</u>
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
B.1.9	TRAINEE PREREQUISITES:	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Dictated by task hierarchy.</u>
	<input type="checkbox"/> None	

FAMILY: B

MEMBER: 1

B.1.10 ADDITIONAL COMMENTS SHEET:

FAMILY: B  
 MEMBER: 2

B	<u>FAMILY: PRINTED MATERIAL</u>								
2	<u>MEMBER: Correspondence Courses</u>								
B.2.1	<u>SOURCE/PROPONENT: Director, Course Development &amp; Trng., USAFAS. Chief, Prod. &amp; Dist., Army Correspondence Course Program Directorate (ATTSC-AC). Ft. Eustis, VA.</u>								
B.2.2	<u>DESCRIPTION:</u> <p>Correspondence courses are designed primarily to parallel resident instruction. A course includes a number of subcourses that are inter-related. A subcourse is the basic instructional unit. It usually covers one subject area and consists of from one to nine lessons and an examination. All subcourses must be passed for course credit. Student courses require no personnel support as they are student-requested and self-completed and graded by the administering school. Group oriented lessons, however, need the supervision of one qualified instructor. Courses are written to cover the broad student population that cannot attend resident training due to funds or facility constraints, e.g., NCOs who want to advance in grade but cannot leave units and reserve component personnel.</p>								
B.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"><u>X</u> Individual</td> <td><u>Standardized instruction that can be administered individually or in a group mode.</u></td> </tr> <tr> <td>_____ Collective</td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> </table>	<u>X</u> Individual	<u>Standardized instruction that can be administered individually or in a group mode.</u>	_____ Collective	_____		_____		_____
<u>X</u> Individual	<u>Standardized instruction that can be administered individually or in a group mode.</u>								
_____ Collective	_____								
	_____								
	_____								

FAMILY: B

MEMBER: 2

B.2.3 TRAINING AND EVALUATION (CONT'D)

B.2.3.1 LEVEL OF TRAINING:

COMMENTS

X Unit Organization & Job Duties As determined by course design.

X Tool Applications to Unit  
Job Duties

X Component Procedures

X Task/Situation Practice

     Small-Team

     Larger-Team

     Multi-Unit

     Command Staff Exercise

B.2.3.2 LEVEL OF EVALUATION:

X Module Test Course exam.

X Lesson Items Problem solving within sub-  
courses.



FAMILY: B

MEMBER: 2

B.2.3.2 LEVEL OF EVALUATION (CONT'D)

COMMENTS

☒ Individual Performance/SQT

Written exam which is graded by  
administering school

☐ Written

☐ Hands-On

☐ Performance Certification

☐ Team Exercise/ARTEP:

Positions or echelons  
interacting:

B.2.4 CAPABILITIES:

B.2.4.1 PRESENTATION:

a. Visual

☒ Alphanumeric

Textual material that can be prepared in a  
print format.

☒ Special Symbolology

☐ 2-D Graphics

☐ 3-D Graphics

☒ Static Displays

☐ Motion

☒ Color

b. Auditory

☐ Signals/Tones

☐ Speech

c. Tactile

☐ Size/Shape

☐ Positional Cues

FAMILY: B

MEMBER: 2

B.2.4.2 RESPONSE:		COMMENTS
a. Verbal/Symbolic		
<input checked="" type="checkbox"/> Choice Selection		<u>Course examination.</u>
<input checked="" type="checkbox"/> Specific Recall		
<input checked="" type="checkbox"/> Composed/Created		<u>Solving exercises.</u>
b. Performance		
<input type="checkbox"/> Indication		<u>As required by practical exercises</u>
<input type="checkbox"/> Manipulation		<u>within the course material.</u>
<input checked="" type="checkbox"/> Read/Interpret		
<input type="checkbox"/> Listen/Interpret		
<input type="checkbox"/> Voice Composition		
<input checked="" type="checkbox"/> Situation Evaluation		
<input checked="" type="checkbox"/> Decide Action		
B.2.4.3 TRAINING MANAGEMENT:		
a. Feedback		
<input type="checkbox"/> Informative		
<input checked="" type="checkbox"/> Evaluative		<u>Grades can be superior, excellent,</u>
<input type="checkbox"/> Corrective		<u>satisfactory, unsatisfactory.</u>
<input type="checkbox"/> Summary		
<input type="checkbox"/> Immediate		
<input checked="" type="checkbox"/> Delayed		<u>machine graded by administrative school.</u>
b. Presentation Control		
<input checked="" type="checkbox"/> Learner		<u>Self-completed.</u>
<input type="checkbox"/> Media		
<input type="checkbox"/> Instructor		

MEMBER: 2

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FAMILY: B

MEMBER: 2

B.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Adequate classroom for group study mode.</u>
		<u></u>
		<u></u>
B.2.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	<u></u>
B.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u></u>
	<input type="checkbox"/> Future Date	<u></u>
	<input type="checkbox"/> Unknown	<u></u>
B.2.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	<u></u>
	<input type="checkbox"/> Install	<u></u>
	<input type="checkbox"/> Remote Access (Telecommunications)	<u></u>
	<input type="checkbox"/> In System	<u></u>
	<input type="checkbox"/> Job Materials	<u></u>
B.2.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u>Chief, Prod. &amp; Dist., ACCP Directorate</u>
	<input type="checkbox"/> Unit Issue	<u>(ATTSC-AC), U.S. Army Trng. Support Center,</u>
		<u>Ft. Eustis, VA</u>
B.2.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Dept of Army Pamphlet 35-20</u>
	<input type="checkbox"/> Probable	<u>Announcement of Army Correspondence</u>
	<input type="checkbox"/> Unknown	<u>Courses. (Gives addresses of all Army</u>
		<u>schools and lists courses/subcourses</u>
		<u>offered by each.)</u>
		<u></u>



FAMILY: B  
MEMBER: 2

B.2.7	<u>SUPPORT REQUIREMENTS:</u>	
B.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input type="checkbox"/> Storage Areas	
	<input type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input checked="" type="checkbox"/> Expendable Material	<u>Individual copy issued to trainee.</u>
B.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
B.2.7.3	<u>MANNING REQUIREMENTS: Total = <u>1</u></u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>Classroom Supervisor for group study.</u>
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
B.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>Course writers, administrators, mailers,</u>
	<input type="checkbox"/> Special Equipment	<u>and graders.</u>
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input checked="" type="checkbox"/> Update	<u>Three-year revision cycle.</u>

FAMILY: B

MEMBER: 2

B.2.8	COST DATA:	<u>COMMENTS</u>
B.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
B.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
B.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
B.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
B.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Specifically listed by course.</u>
	<input type="checkbox"/> None	

FAMILY: B

MEMBER: 2

B.2.10 ADDITIONAL COMMENTS SHEET:

## TRAINING/COMBAT LITERATURE

Training/Combat literature is printed materials published for the primary purpose of informing all concerned as to the doctrine, tactics, techniques, and procedures adopted for use in training and evaluating individuals and units. The materials may contain illustrations and other forms of textual presentations suitable for reproduction using print. Production costs for the documentation tends to be low but will vary with the content. Update of materials may prove to be time-consuming and difficult to maintain.

There are several categories:

Soldiers' Manuals, job books and Skill Qualification Tests (SQTs) are designed to inform and maintain a record of those tasks that an individual soldier must master to demonstrate proficiency and thereby advance within a specific MOS. The specific tasks are specified, and the conditions and standards under which mastery must occur are established. The individual demonstrates that he has mastered the specific tasks by written, hands-on, or performance-certification measures.

In similar fashion, Army Training and Evaluation Program (ARTEP) documentation is prepared to evaluate the readiness of units. ARTEPs are prepared for different echelon levels and indicate the mission that is to be performed, the general conditions (situation) under which the unit must operate, and the primary training and evaluation standards upon which the unit will be evaluated. The logistical and support requirements that are required for a specific mission execution and evaluation are also indicated. Evaluation guidelines to formulate a GO, NO GO criteria are included within the documentation. ARTEP functions as an aid to the development of a training philosophy and training program, as well as an evaluative vehicle.



FAMILY: C

MEMBER CHARACTERISTICS TABLE

MEMBER	Training Method		Training Level	Setting		Available Date	Acquisition & Courseware Costs					Presentation			
	I	C	1 - 8	I	U		High Med Low					V	A	T	S
							5	4	3	2	1				
1. Soldiers Manual/Job Books	X		4		X	Now					X	X			X
2. Skill Qualification Tests (SQT)	X		4		X	Now					X	X	X	X	X
3. Army Training & Evaluation Program (ARTEP)		X	7		X	Now				X		X	X	X	X

FAMILY: C

MEMBER: 1

C	<u>FAMILY:</u> TRAINING/COMBAT LITERATURE	
1	<u>MEMBER:</u> Soldier's Manual/Job Book	
C.1.1	<u>SOURCE/PROPONENT:</u> Source: U.S. Army AG Publications Ctr., Baltimore, MD. Proponent: Directorate of Trng. Developments, Soldier's Manual Branch, USAFAS.	
C.1.2	<u>DESCRIPTION:</u> <p>The Soldier's Manual is written material designed to tell the soldier what tasks he must be proficient in to be MOS qualified. If the soldier masters the tasks in this manual, he should progress readily to positions of responsibility commensurate with his aptitude and motivation. A task describes what he is expected to do in combat. For each task the manual has a training and evaluation outline. The outline describes the task, the conditions under which he must perform them, and the standards to which he must perform.</p> <p>A record of his progress is maintained in a Job Book. The Job Book contains separate job cards or a list designed to help an NCO keep track of the training and training requirements of his subordinates. It lists critical tasks from the Soldier's Manual for each soldier's duty at his skill level, and includes columns for the entry of the results of the soldier's most recent evaluation on the task. Job books will be prepared for only Skill Levels 1 and 2 at this time. The advisability of using books for higher skill levels is being studied.</p> <p>The soldier must master the tasks in the Soldier's Manual. To ensure that he does so, he is periodically tested by taking the Skill Qualification Test (SQT) (refer to C.2). The test results will be used to determine his knowledge of his MOS and to qualify him for promotion. At the bottom of each training and evaluation outline is</p>	
C.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> (Continued on next page)	
	<u>COMMENTS</u>	
	<u>X Individual</u>	<u>Specific tasks for each manual for varying skill levels which are MOS related.</u>
	<u>X Collective</u>	<u>Record of soldier's performance for critical tasks selected from the Soldier's Manual, Skill Level 1 and 2.</u>

FAMILY: C

MEMBER: 1

C.1.2

DESCRIPTION: (Cont'd)

a list of additional references. The soldier must consult them to find out exactly how to perform the tasks. The Soldier's Manual does not teach him all he needs to know about a task. He has to do additional study. Once he finds out WHAT the tasks are, and HOW to do them, it's simply a matter of practice.

FAMILY: C  
MEMBER: 1

C.1.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
C.1.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>Unit Organization &amp; Job Duties</u>	<u>Specific tasks at varying skill levels that are related to a specific MOS. Gives description of task, conditions, and standards for task mastery.</u>
	<u>X</u> Tool Applications to Unit Job Duties	
	<u>X</u> Component Procedures	
	<u>X</u> Task/Situation Practice	
	<u>Small-Team</u>	
	<u>Larger-Team</u>	
	<u>Multi-Unit</u>	
	<u>Command Staff Exercise</u>	
C.1.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<u>Task mastery as determined by SQT (refer to C.2).</u>
	<u>Lesson Items</u>	<u>Progress on each task is entered into the Job Book.</u>



FAMILY: C

MEMBER: 1

C.1.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	Meet task conditions as measured by SQT.
	<u>X</u> Written	
	<u>X</u> Hands-On	
	<u>X</u> Performance Certification	
	Team Exercise/ARTEP:	
	Positions or echelons interacting:	
C.1.4	<u>CAPABILITIES:</u>	
C.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	Whatever can be printed in Soldier's Manual
	<u>X</u> Special Symbolology	format; includes text, tables, charts, maps, etc.
	<u>    </u> 2-D Graphics	
	<u>    </u> 3-D Graphics	
	<u>X</u> Static Displays	Job Book has four columns with Task No. and description (from Soldier's Manual).
	<u>    </u> Motion	
	<u>    </u> Color	GO-NO GO (for scoring soldier) and date.
	b. Auditory	
	<u>    </u> Signals/Tones	
	<u>    </u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

FAMILY: C

MEMBER: 1

C.1.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	___ Choice Selection	Mastery of tasks as determined by SQT.
	___ Specific Recall	
	___ Composed/Created	
	b. Performance	
	___ Indication	
	___ Manipulation	
	___ Read/Interpret	
	___ Listen/Interpret	
	___ Voice Composition	
	___ Situation Evaluation	
	___ Decide Action	
C.1.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	___ Informative	None: Self-study for Soldier's Manual.
	___ Evaluative	
	___ Corrective	
	___ Summary	
	<u>X</u> Immediate	GO/NO GO entered in Job Book by
	___ Delayed	instructor.
	b. Presentation Control	
	<u>X</u> Learner	Self-paced through tasks.
	___ Media	
	___ Instructor	

FAMILY: CMEMBER: 1

## C.1.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

## c. Sequencing

     Linear Dependent on student need/preference.  
     Response Branching \_\_\_\_\_  
     History Branching \_\_\_\_\_  
     Repetitive Practice \_\_\_\_\_

## d. Recordkeeping

     Automatic (Temporary Storage) \_\_\_\_\_  
     Automatic (Permanent Storage) \_\_\_\_\_  
  X   Manual Job Book kept by supervisor.  
  X   None For Soldier's Manual.

C.1.5 SETTING:C.1.5.1      INSTITUTIONAL

     Service School \_\_\_\_\_  
     Army Training Ctr (ATC) \_\_\_\_\_  
     Div/Post Installation Schools \_\_\_\_\_

C.1.5.2   X   UNIT

     In-System (Embedded) Soldier's Manual used by individual  
  X   Job-Station at unit level. Job Book is used by  
  X   Individual Learning Ctr (ILC) supervisor.  
  X   Barracks/Home \_\_\_\_\_  
  X   Garrison Training Area \_\_\_\_\_  
     Local Training Area \_\_\_\_\_  
     Major Training \_\_\_\_\_  
     National Range \_\_\_\_\_

FAMILY: C

MEMBER: 1

C.1.5.3	REQUIREMENTS:	COMMENTS
C.1.6	EXPORTABILITY:	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
C.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	Per production and distribution schedule
	<input type="checkbox"/> Future Date	for each targetted MOS.
	<input type="checkbox"/> Unknown	
C.1.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
C.1.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	Additional material can be ordered.
	<input checked="" type="checkbox"/> Unit Issue	Based assigned strength in particular
		MOS and skill level.
C.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	U.S. Army AG Publications Center,
	<input type="checkbox"/> Probable	Baltimore, MD (Use DA Form 17).
	<input type="checkbox"/> Unknown	



FAMILY: C  
MEMBER: 1

C.1.7 SUPPORT REQUIREMENTS:		COMMENTS
C.1.7.1	LOGISTICAL SUPPORT:	
	<input type="checkbox"/> Storage Areas	
	<input type="checkbox"/> Spare Parts	Task specific equipment.
	<input type="checkbox"/> Additional Copies On Hand	
	<input checked="" type="checkbox"/> Expendable Material	References as listed in appendix of
		each manual.
C.1.7.2	MAINTENANCE REQUIREMENTS:	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
C.1.7.3	MANNING REQUIREMENTS: Total = <u>1</u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators	To maintain Job Book.
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
C.1.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input checked="" type="checkbox"/> Special Personnel Skills	Prepare task statements, conditions,
	<input type="checkbox"/> Special Equipment	and standards for proponent MOS.
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY: C

MEMBER: 1

C.1.8	<u>COST DATA:</u>	<u>COMMENTS</u>
C.1.8.1	SYSTEM ACQUISITION:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>  X  </u> Low	
	<u>    </u> None	
C.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>    </u> Low	
	<u>  X  </u> None	
C.1.8.3	MAINTENANCE COSTS:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>    </u> Low	
	<u>  X  </u> None	
C.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>  X  </u> Low	
	<u>    </u> None	
C.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<u>    </u> Education	
	<u>  X  </u> Physical Skills	<u>Soldier's manuals match specific MOSs</u>
	<u>  X  </u> Mental Skills	<u>and skill levels.</u>
	<u>  X  </u> MOS Requirements	<u>As required for particular MOS.</u>
	<u>    </u> Aptitudes	
	<u>    </u> Schools/Courses	
	<u>    </u> Training	
	<u>    </u> Other	
	<u>    </u> None	

FAMILY: C

MEMBER: 1

C.1.10	<u>ADDITIONAL COMMENTS SHEET:</u>
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FAMILY: C  
 MEMBER: 2

C	<u>FAMILY: TRAINING COMBAT LITERATURE</u>										
2	<u>MEMBER: Skill Qualification Tests (SQT)</u>										
C.2.1	<u>SOURCE/PROPONENT:</u> Dir., Course Dev. & Trng. (Individual Trng. Team), USAFAS Individual Trng. Evaluation Directorate ATSC, Ft. Eustis, VA										
C.2.2	<u>DESCRIPTION:</u> <p>The SQT consists of tasks taken from the Soldier's Manual for a specific MOS. These tasks are tested in three components: a written component, a hands-on component, and a performance certification component. The written component is a multiple-choice type test. The hands-on portion tests the individual and ability to use the equipment in his unit and the performance certification component allows the soldier's supervisors to rate him on tasks such as weapons qualification or physical fitness; and other tasks which cannot be tested using the other components. Soldiers are then tested in their current skill and also for advancement potential.</p> <p>Generally, preparedness and potential for growth is accomplished by selecting 70% of all tasks to be tested from the current and lower skill levels and 30% of the tasks from the next higher skill level. The soldier to take a specific SQT is identified and supplied an SQT Notice and a copy of the Soldier's Manual a minimum of 90 days prior to actual testing. The SQT Notice identifies all tasks to be tested. It lists the questions that the soldier will encounter, includes a sample question, and identifies the page number in the Soldier's Manual where the task is located. The hands-on portion of the SQT Notice lists the actual performance measure that will be tested when the SQT is administered. The written component of the SQT</p> <p style="text-align: right;">(Continued on next page)</p>										
C.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right; margin-right: 50px;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%;"><u>X</u> Individual</td> <td>Tasks selected from Soldier's Manual for specific MOS/Skill Level.</td> </tr> <tr> <td>_____ Collective</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>	<u>X</u> Individual	Tasks selected from Soldier's Manual for specific MOS/Skill Level.	_____ Collective							
<u>X</u> Individual	Tasks selected from Soldier's Manual for specific MOS/Skill Level.										
_____ Collective											



FAMILY: C

MEMBER: 2

C.2.2

DESCRIPTION: (Cont'd)

consists of 30-40 tasks. Each task is subdivided into a series of 2 to 1 questions concerning a single task. If the soldier is to receive a GO on the task, he must correctly answer a specific number of the questions. Normally, one correct unit is awarded if the individual correctly completes the required number of questions. The hands-on component tests the individual on his ability to use the equipment in his unit. The soldier must complete any number of performance measures to receive a GO for the task. Some tasks have critical performance measures that must be accomplished if the soldier is to receive a GO for the task; some do not. Other tasks are processed scored. The soldier must perform a specific process to receive a GO for the unit. Still others are product scored. The soldier simply completes the performance in any order he desires and is scored a GO for the task. The performance certification portion of the SQT is sent to the individual's supervisor. The supervisor must certify that the tested soldier has completed the task, as prescribed by the performance measures, at some point during the 12-month period immediately preceding the quarter in which the soldier is tested.

FAMILY: C

MEMBER: 2

C.2.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
C.2.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	Composed of tasks that are job-related for a specific MOS. States the objectives, conditions, and standards that must be met to demonstrate task mastery. There should be a high correspondence between the delivery systems used for each level of task training requirement and the delivery system used for SQT evaluations (3.2).
	<u>X</u> Tool Applications to Unit Job Duties	
	<u>X</u> Component Procedures	
	<u>X</u> Task/Situation Practice	
	<u>    </u> Small-Team	
	<u>    </u> Larger-Team	
	<u>    </u> Multi-Unit	
	<u>    </u> Command Staff Exercise	
C.2.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	Test for a specific MOS. 70% tasks from current/lower skill levels. 30% tasks from next higher skill level.
	<u>    </u> Lesson Items	

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DOCUMENT**

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FAMILY: C

MEMBER: 2

C.2.4.3	TRAINING MANAGEMENT (CONT'D)		<u>COMMENTS</u>
	c. Sequencing		
	<u>X</u> Linear	As specified by SQT administration	
	<u>    </u> Response Branching	manual.	
	<u>    </u> History Branching		
	<u>    </u> Repetitive Practice		
	d. Recordkeeping		
	<u>X</u> Automatic (Temporary Storage)	Answer sheets from tested	
	<u>X</u> Automatic (Permanent Storage)	soldier. Computer and per-	
	<u>X</u> Manual	sonnel folder. Mark-sense	
	<u>    </u> None	record forms and CDR's perfor-	
C.2.5	<u>SETTING:</u>		
C.2.5.1	<u>    </u> INSTITUTIONAL		
	<u>    </u> Service School		
	<u>    </u> Army Training Ctr (ATC)		
	<u>    </u> Div/Post Installation Schools		
C.2.5.2	<u>X</u> UNIT		
	<u>    </u> In-System (Embedded)		
	<u>    </u> Job-Station		
	<u>    </u> Individual Learning Ctr (ILC)		
	<u>    </u> Barracks/Home		
	<u>X</u> Garrison Training Area	SQT administered at Bn level.	
	<u>X</u> Local Training Area		
	<u>    </u> Major Training		
	<u>    </u> National Range		



FAMILY: C

MEMBER: 2

C.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Equipment (actual and/or training devices) required to demon-</u>
		<u>strate task can be accomplished by soldier, per test and</u>
		<u>administration manual.</u>
C.2.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
C.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u>For certain MOS/Skill Levels in</u>
	<input type="checkbox"/> Future Date	<u>accordance with EPMS priorities schedule.</u>
	<input type="checkbox"/> Unknown	
C.2.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	<u>Or AG publication channels.</u>
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
C.2.6.3	BASIS OF ISSUE:	
	<input type="checkbox"/> On Demand	
	<input checked="" type="checkbox"/> Unit Issue	<u>At least 90 days prior to actual testing.</u>
C.2.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Chief, Distribution Division, Individual</u>
	<input type="checkbox"/> Probable	<u>Trng., Evaluation Directorate, U.S. Army</u>
	<input type="checkbox"/> Unknown	<u>Trng. Spt. Ctr., Ft. Eustis, VA 23604 or</u>
		<u>U.S. Army AG Publications Ctr., Baltimore,</u>
		<u>MD</u>

FAMILY: C  
MEMBER: 2

C.2.7	<u>SUPPORT REQUIREMENTS:</u>	
C.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>X</u> Storage Areas	<u>SQT soldier booklets and administra-</u>
	<u>X</u> Spare Parts	<u>tive manuals. Equipment, devices,</u>
	<u>X</u> Additional Copies On Hand	<u>and parts to support Hands-On</u>
	<u>X</u> Expendable Material	<u>component.</u>
C.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>    </u> No	
	<u>X</u> Operator	<u>Equipment/devices required for</u>
	<u>X</u> Organizational Maintenance	<u>Hands-On and Perf. Certification</u>
	<u>    </u> Direct Support Maintenance	<u>components.</u>
	<u>    </u> General Support Maintenance	
	<u>    </u> Depot Maintenance	
C.2.7.3	<u>MANNING REQUIREMENTS: Total = 3-5 Minimum</u>	
	<u>X</u> System Operators	<u>If certain training devices or</u>
	<u>    </u> Instructors/Facilitators	<u>materiel systems used (e.g., TACFIRE).</u>
	<u>X</u> Simulation/Monitor Positions	<u>If manual or device simulations used.</u>
	<u>X</u> Support Personnel	<u>Varies with SQT, schedule, and MOS</u>
		<u>(Continued on next page)</u>
C.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> Special Personnel Skills	<u>Design adequate job performance</u>
	<u>    </u> Special Equipment	<u>measures and test administration</u>
	<u>    </u> Facility	<u>manual.</u>
	<u>    </u> Reproduction	
	<u>X</u> Update	<u>As required by revisions to technical</u>
		<u>doctrine, to ARTEP, to MOS structure</u>
		<u>and job duties, and to Army equipment</u>
		<u>or materiel systems.</u>

FAMILY: C

MEMBER: 2

C.2.7.3 MANNING REQUIREMENTS: (Cont')

density; e.g., 21 for MOS 13F overall testing requirements. Requires Test Control Officer, Test Site Manager, scorers and raters/assistant scorers.

FAMILY: CMEMBER: 2

C.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
C.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
C.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	Will vary with materiel and personnel
	<input type="checkbox"/> Medium	required to administer SQT in accordance
	<input checked="" type="checkbox"/> Low	with SQT schedule and MOS density.
	<input type="checkbox"/> None	
C.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
C.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	See comment C.2.8.2, costs will vary. Re-
	<input type="checkbox"/> Medium	quired DA Pamphlets include soldier SQT
	<input checked="" type="checkbox"/> Low	Notices, Manuals for Administration of HC
	<input type="checkbox"/> None	and PC components, and ancillary materials
		and forms by MOSC and Skill Levels.
C.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	Soldier must be assigned to MOS and skill
	<input type="checkbox"/> Aptitudes	level(s) specified for SQT.
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	



FAMILY: C  
MEMBER: 2

C.2.10 ADDITIONAL COMMENTS SHEET:

FAMILY: C  
 MEMBER: 3

C	<u>FAMILY:</u> TRAINING/COMBAT LITERATURE	
3	<u>MEMBER:</u> Army Training and Evaluation Program (ARTEP)	
C.3.1	<u>SOURCE/PROONENT:</u> Source: US Army AG Publications Center, Baltimore,MD Proponent: Directorate of Training Developments (Collective Training Team), USAFAS	
C.3.2	<u>DESCRIPTION:</u> ARTEP is a listing of performance-oriented training objectives. Each training objective has a task, condition, and a standard of performance. ARTEP, a diagnostic tool, is a new concept designed to assist commanders in planning, conducting, and evaluating training. The document forms the basis for a unit's training program and a training philosophy. The ARTEP is divided into three levels (1, 2 and 3) which represent gradations of difficulty for collective proficiency to accommodate units of reduced readiness.	
C.3.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>  <div> <input type="checkbox"/> Individual         </div> <div> <input checked="" type="checkbox"/> Collective         </div>	<u>COMMENTS</u>  Tasks selected from specific ARTEP for unit to demonstrate task/mission readiness and/or areas for future training requirements.

FAMILY: C  
MEMBER: 3

C.3.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
C.3.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	_____
		_____
		_____
	<input type="checkbox"/> Tool Applications to Unit Job Duties	_____
		_____
	<input type="checkbox"/> Component Procedures	_____
		_____
	<input type="checkbox"/> Task/Situation Practice	_____
		_____
	<input checked="" type="checkbox"/> Small-Team	<u>Composed of tasks that are mission oriented</u>
		<u>for which a unit needs to demonstrate</u>
	<input checked="" type="checkbox"/> Larger-Team	<u>readiness. Major mission operation</u>
		<u>training objectives (e.g., tactical opera-</u>
	<input checked="" type="checkbox"/> Multi-Unit	<u>tions) are specified. Objectives are per-</u>
		<u>formance-oriented and are specified for</u>
	<input type="checkbox"/> Command Staff Exercise	<u>each echelon within a unit.</u>
		_____
C.3.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Test for specific mission/task</u>
		<u>objectives at different unit</u>
		<u>levels for collective evaluation.</u>
	<input type="checkbox"/> Lesson Items	<u>Evaluation is go/no go standard.</u>
		_____
		_____

FAMILY: C  
MEMBER: 3

C.3.3.2	LEVEL OF EVALUATION (CONT'D)		<u>COMMENTS</u>
	<u>Individual Performance/SQT</u>		
	<u>Written</u>		
	<u>Hands-On</u>		
	<u>Performance Certification</u>		
	<u>X</u> Team Exercise/ARTEP: Positions or echelons interacting:	<u>Combination of units within echelon levels.</u>	
C.3.4	<u>CAPABILITIES:</u>		
C.3.4.1	<u>PRESENTATION:</u>		
	a. Visual		
	<u>X</u> Alphanumeric	<u>As required for task/mission objectives</u>	
	<u>X</u> Special Symbology	<u>for collective presentation and response.</u>	
	<u>X</u> 2-D Graphics		
	<u>X</u> 3-D Graphics		
	<u>X</u> Static Displays		
	<u>X</u> Motion		
	<u>X</u> Color		
	b. Auditory		
	<u>X</u> Signals/Tones	<u>As required in performance of mission</u>	
	<u>X</u> Speech	<u>objectives.</u>	
	c. Tactile		
	<u>X</u> Size/Shape	<u>Unit equipment or devices/simulators.</u>	
	<u>X</u> Positional Cues		



MEMBER: 3

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FAMILY: C  
MEMBER: 3

C.3.4.3	TRAINING MANAGEMENT (CONT'D)	<u>COMMENTS</u>
	c. Sequencing	
	<input type="checkbox"/> Linear	<u>As determined by ARTEP in conjunction</u>
	<input type="checkbox"/> Response Branching	<u>with participating units.</u>
	<input type="checkbox"/> History Branching	<u></u>
	<input type="checkbox"/> Repetitive Practice	<u></u>
	d. Recordkeeping	
	<input type="checkbox"/> Automatic (Temporary Storage)	<u></u>
	<input type="checkbox"/> Automatic (Permanent Storage)	<u></u>
	<input checked="" type="checkbox"/> Manual	<u>As maintained by ARTEP</u>
	<input type="checkbox"/> None	<u>evaluation team.</u>
C.3.5	<u>SETTING:</u>	
C.3.5.1	<input type="checkbox"/> INSTITUTIONAL	
	<input type="checkbox"/> Service School	<u></u>
	<input type="checkbox"/> Army Training Ctr (ATC)	<u></u>
	<input type="checkbox"/> Div/Post Installation Schools	<u></u>
C.3.5.2	<input checked="" type="checkbox"/> UNIT	
	<input type="checkbox"/> In-System (Embedded)	<u></u>
	<input type="checkbox"/> Job-Station	<u></u>
	<input type="checkbox"/> Individual Learning Ctr (ILC)	<u></u>
	<input type="checkbox"/> Barracks/Home	<u></u>
	<input checked="" type="checkbox"/> Garrison Training Area	<u>Collective training among units at</u>
	<input checked="" type="checkbox"/> Local Training Area	<u>different echelons.</u>
	<input checked="" type="checkbox"/> Major Training	<u></u>
	<input type="checkbox"/> National Range	<u></u>

FAMILY: C  
MEMBER: 3

C.3.5.3	REQUIREMENTS:	<u>COMMENTS</u>
C.3.6	EXPORTABILITY:	
	<u>X</u> In Units <u>    </u> Planning <u>    </u> No <u>Since September '75.</u>	
C.3.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>X</u> Currently Available	
	<u>    </u> Future Date	
	<u>    </u> Unknown	
C.3.6.2	METHOD:	
	<u>X</u> Mail/Ship	<u>Or AG publication channels.</u>
	<u>    </u> Install	
	<u>    </u> Remote Access (Telecommunications)	
	<u>    </u> In System	
	<u>    </u> Job Materials	
C.3.6.3	BASIS OF ISSUE:	
	<u>X</u> On Demand	<u>Additional copies of ARTEP.</u>
	<u>X</u> Unit Issue	
C.3.6.4	SOURCE:	
	<u>X</u> Known	<u>U.S. Army AG Publications Center,</u>
	<u>    </u> Probable	<u>Baltimore, MD</u>
	<u>    </u> Unknown	

FAMILY: C  
MEMBER: 3

C.3.7	<u>SUPPORT REQUIREMENTS:</u>	
C.3.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>X</u> Storage Areas	<u>ARTEP manual. Equipment, devices,</u>
	<u>X</u> Spare Parts	<u>and parts to support conduct of</u>
	<u>X</u> Additional Copies On Hand	<u>ARTEP.</u>
	<u>X</u> Expendable Material	
C.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>    </u> No	<u>Equipment/devices required for</u>
	<u>X</u> Operator	<u>conduct of task/mission objectives</u>
	<u>X</u> Organizational Maintenance	<u>as specified by the ARTEP.</u>
	<u>    </u> Direct Support Maintenance	
	<u>    </u> General Support Maintenance	
	<u>    </u> Depot Maintenance	
C.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>8+</u></u>	
	<u>    </u> System Operators	
	<u>X</u> Instructors/Facilitators	<u>Varies with unit. Evaluators</u>
	<u>    </u> Simulation/Monitor Positions	<u>include officers and NCO. They may</u>
	<u>X</u> Support Personnel	<u>be supported by professional</u>
		<u>civilians and clerical personnel.</u>
C.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> Special Personnel Skills	<u>Team turns to USAFAS and field</u>
	<u>X</u> Special Equipment	<u>organizations for further experties.</u>
	<u>    </u> Facility	<u>Special equipment will be determined</u>
	<u>    </u> Reproduction	<u>by the unit/mission. Any weapons,</u>
	<u>X</u> Update	<u>simulators, or other literature will</u>
		<u>be supplied by the school/unit.</u>



FAMILY: CMEMBER: 3

C.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
C.3.8.1	SYSTEM ACQUISITION:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>    </u> Low	
	<u>    </u> None	
C.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<u>X</u> High	<u>Will vary with material and personnel</u>
	<u>X</u> Medium	<u>required to conduct ARTEP in accordance</u>
	<u>X</u> Low	<u>with established training and evaluation</u>
	<u>    </u> None	<u>schedules.</u>
C.3.8.3	MAINTENANCE COSTS:	
	<u>X</u> High	<u>As required to support materiel used</u>
	<u>X</u> Medium	<u>in conduct of ARTEP.</u>
	<u>X</u> Low	
	<u>    </u> None	
C.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<u>    </u> High	
	<u>X</u> Medium	<u>Produce ARTEP manuals and supportive</u>
	<u>X</u> Low	<u>materials used to evaluate conduct of</u>
	<u>    </u> None	<u>ARTEP.</u>
C.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<u>    </u> Education	
	<u>    </u> Physical Skills	
	<u>    </u> Mental Skills	
	<u>    </u> MOS Requirements	
	<u>    </u> Aptitudes	
	<u>    </u> Schools/Courses	
	<u>    </u> Training	
	<u>    </u> Other	
	<u>    </u> None	

FAMILY: C

MEMBER: 3

C.3.10 ADDITIONAL COMMENTS SHEET:

## INSTRUCTOR WITH STANDARD AIDS

Traditionally, instruction is presented to the student by an instructor in a face-to-face situation, using standard instructional aids such as charts and display boards.

The instructor presents the instructional information, usually in lecture form and in a classroom or field training setting, to the students, provides opportunities for interaction, clarification, and limited remediation. Quality of instruction may vary as a function of the instructor's abilities. Costs of training and maintaining instructional staff is a major factor in overall program costs.

Class packets are staff training support materials. The packets consist of three different sets of instructional material: an instructor, student, and slide packet. Packets train both the unit and individual using presented material and practical exercises. The instructor and student interact for feedback. They can be used at different echelon levels and are available on request.

Charts and Display Boards. Wall charts are pre-prepared diagrams or pictorials, usually on paper, cloth, or plastic sheets, for classroom use. Display Boards are any two-dimensional medium for the display of non-projected visuals; they include large writing surfaces such as chalkboards and a variety of boards to which display materials can be attached.

Both charts (if the surface is properly protected) and display boards permit the addition of illustrative markings during the presentation and the "building-up" of the materials at a rate and manner compatible with student learning. Charts, while requiring advance preparation, are generally less bother while being used than projected visuals (though more trouble to store and set up) and can be made any ratio of height to width. Both charts and display boards, while relatively inexpensive to produce and adaptable to a variety of instructional settings and situations, rely heavily on the availability and effectiveness of a live instructor for their teaching potential.

## INSTRUCTOR WITH STANDARD AIDS (Cont'd)

**Overhead Transparencies.** Overhead transparency projectors enable the projection of images and silhouettes drawn upon various sizes of clear acetate, most commonly 8" x 10". They can be used in settings with near-normal ambient light at close or moderate projection ranges. The projector requires the proximity of an operator (usually the instructor) for effective use. With an operator, transparencies offer a flexible display medium by stacking and overlapping, covering and exposing portions, etc. Transparencies are relatively easy and inexpensive to prepare, the full range of still photography and drafting techniques may be used, and instruction is easily modified by inserting or deleting transparencies; however, the projectors and transparencies are cumbersome to move and store.

**Models and Mock-Ups.** Models and mock-ups are three-dimensional representations of objects which differ from the real object in size, material, and/or functional capability. They may be constructed in a manner which permits easy disassembly or may be made of transparent materials so that the student may see internal components and their physical and functional relationships. Their most frequent use is to illustrate both static and dynamic spatial relationships.



FAMILY: D

MEMBER CHARACTERISTICS TABLE

MEMBER	Training Method		Training Level	Setting		Available Date	Acquisition & Courseware Costs					Presentation			
	I	C	1 - 8	I	U		High Med Low					V	A	T	S
							5	4	3	2	1				
1. Class Packets	X	X	8	X	X	Now					X	X	X		X
2. Charts/Display Boards	X	X	8	X	X	Now					X	X			
3. Overhead Transparencies	X		8	X		Now					X	X			
4. Models/Mockups	X	X	8	X	X	Now					X	X		X	X

FAMILY: D  
 MEMBER: 1

D	<u>FAMILY:</u> INSTRUCTOR WITH STANDARD AIDS													
1	<u>MEMBER:</u> Class Packets													
D.1.1	<u>SOURCE/PROPONENT:</u> Director, Course Development & Training, USAFAS. Orders: Commandant, USAFAS, ATTN: ATSF-CR-TS, Ft. Sill, OK 73503													
D.1.2	<u>DESCRIPTION:</u> <p>Class Packets represent a group of staff training support materials based on resident officer classes and tailored for extension needs of Active Army and Reserve Component Corps. The packets consist of three different sets of instructional material: an instructor's, student, and slide packet. Each enhance the use of the other but are useful independent of each other. Packets train both the unit and the individual using both presented material and practical exercises. Lessons may be augmented with Vu-Graph materials. The instructor's manuscript guides class conduct, and the instructor and student interact extensively for feedback. Appropriate for use on Division, Battalion, and Brigade levels. The packets are currently available for use by request. An instructor and Vu-Graph operator are required to best use the packets which are each individually oriented to a specific MOS.</p>													
D.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 15%;"><u>X</u></td> <td style="width: 35%;">Individual</td> <td style="width: 50%;">Self-paced group (classroom) mode.</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td><u>X</u></td> <td>Collective</td> <td>Addresses a common practical problem as defined in Class Packet. Supports conduct, testing, and evaluation of unit training.</td> </tr> </table>		<u>X</u>	Individual	Self-paced group (classroom) mode.							<u>X</u>	Collective	Addresses a common practical problem as defined in Class Packet. Supports conduct, testing, and evaluation of unit training.
<u>X</u>	Individual	Self-paced group (classroom) mode.												
<u>X</u>	Collective	Addresses a common practical problem as defined in Class Packet. Supports conduct, testing, and evaluation of unit training.												

FAMILY: D  
MEMBER: 1

D.1.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
D.1.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	<u>Refereshes, if applicable, to</u> <u>unit-specific requirements.</u>
	<u>X</u> Tool Applications to Unit Job Duties	<u>Basic tools used in unit tasks</u> <u>(e.g., protractor).</u>
	<u>    </u> Component Procedures	
	<u>X</u> Task/Situation Practice	<u>Practical exercises using maps,</u> <u>overlays in given situations.</u>
	<u>X</u> Small-Team	<u>Practical problem, team goal.</u>
	<u>    </u> Larger-Team	
	<u>    </u> Multi-Unit	
	<u>X</u> Command Staff Exercise	<u>Decision making based on</u> <u>scenario, background data.</u>
D.1.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<u>Practical exercise or separate</u> <u>test items.</u>
	<u>X</u> Lesson Items	<u>Embedded test items within</u> <u>lesson material</u>

FAMILY: D  
MEMBER: 1

D.1.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Individual Performance/SQT	<u>Practical exercise and preparation.</u>
	<input checked="" type="checkbox"/> Written	<u>Tests and practical exercises (written).</u>
	<input checked="" type="checkbox"/> Hands-On	<u>Performance oriented.</u>
	<input type="checkbox"/> Performance Certification	
	<input checked="" type="checkbox"/> Team Exercise/ARTEP:	<u>Practical exercise and preparation.</u>
	Positions or echelons interacting:	<u>Section, staff, unit.</u>
D.1.4	<u>CAPABILITIES:</u>	
D.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<input checked="" type="checkbox"/> Alphanumeric	<u>Instructor's manuscript, student reference notes, advance sheets, outlines, practical exercises.</u>
	<input checked="" type="checkbox"/> Special Symbolology	
	<input checked="" type="checkbox"/> 2-D Graphics	<u>Vu-Graphs, charts, maps can simulate 3-D.</u>
	<input type="checkbox"/> 3-D Graphics	
	<input checked="" type="checkbox"/> Static Displays	<u>Demonstration size charts, maps.</u>
	<input type="checkbox"/> Motion	
	<input checked="" type="checkbox"/> Color	<u>Vu-Graph transparencies.</u>
	b. Auditory	
	<input type="checkbox"/> Signals/Tones	
	<input checked="" type="checkbox"/> Speech	<u>As provided by instructor.</u>
	c. Tactile	
	<input type="checkbox"/> Size/Shape	
	<input type="checkbox"/> Positional Cues	



FAMILY: D  
MEMBER: 1

D.1.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>X</u> Choice Selection	<u>As required by instructor or materials.</u>
	<u>X</u> Specific Recall	
	<u>X</u> Composed/Created	
	b. Performance	
	<u>    </u> Indication	<u>Emphasis on performance-specific type</u>
	<u>    </u> Manipulation	<u>varies with subject matter. Practical</u>
	<u>X</u> Read/Interpret	<u>exercises and exams substitute when</u>
	<u>    </u> Listen/Interpret	<u>performance is not feasible.</u>
	<u>    </u> Voice Composition	
	<u>X</u> Situation Evaluation	
	<u>X</u> Decide Action	
	D.1.4.3 TRAINING MANAGEMENT:	
	a. Feedback	
	<u>X</u> Informative	<u>Instructor provides.</u>
	<u>X</u> Evaluative	
	<u>X</u> Corrective	
	<u>    </u> Summary	
	<u>X</u> Immediate	
	<u>X</u> Delayed	
	b. Presentation Control	
	<u>    </u> Learner	
	<u>X</u> Media	<u>Instructor manuscript and student guide.</u>
	<u>    </u> Instructor	

MEMBER: 1121

FAMILY: D  
MEMBER: 1

D.1.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Classroom, training area with applicable unit equipment, or</u>
		<u>unit learning center depending on Class Packet.</u>
D.1.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
D.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	
	<input checked="" type="checkbox"/> Future Date	<u>Reviewed yearly for new requirements.</u>
	<input type="checkbox"/> Unknown	
D.1.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
D.1.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u>Requests to USAFAS, DA Form 17.</u>
	<input type="checkbox"/> Unit Issue	
D.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Commandant, U.S. Army Field Artillery</u>
	<input type="checkbox"/> Probable	<u>U.S. Army Field Artillery School</u>
	<input type="checkbox"/> Unknown	<u>Attn: ATSF-CR-TS</u>
		<u>Fort Sill, OK 73503</u>

FAMILY: D  
MEMBER: 1

D.1.7 SUPPORT REQUIREMENTS:		COMMENTS
D.1.7.1	LOGISTICAL SUPPORT:	
	<input checked="" type="checkbox"/> Storage Areas	For packets, charts, aids, references.
	<input type="checkbox"/> Spare Parts	
	<input checked="" type="checkbox"/> Additional Copies On Hand	For predicted training load.
	<input checked="" type="checkbox"/> Expendable Material	Student materials.
D.1.7.2	MAINTENANCE REQUIREMENTS:	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
D.1.7.3	MANNING REQUIREMENTS: Total = <u>2</u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators	
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input checked="" type="checkbox"/> Support Personnel	Vu-Graphs, devices, equipment aids.
D.1.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input type="checkbox"/> Special Personnel Skills	
	<input checked="" type="checkbox"/> Special Equipment	TASO facilities.
	<input checked="" type="checkbox"/> Facility	Inventory control and distribution.
	<input checked="" type="checkbox"/> Reproduction	
	<input checked="" type="checkbox"/> Update	Must be reordered at least every 3 years as they are updated annually by Artillery School.



FAMILY: DMEMBER: 1

D.1.8	<u>COST DATA:</u>	<u>COMMENTS</u>
D.1.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Mainly reproduction and distribution.
	<input type="checkbox"/> None	
D.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Personnel and facilities for each use.
	<input type="checkbox"/> None	
D.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
D.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input checked="" type="checkbox"/> High	Depends on materials associated with
	<input checked="" type="checkbox"/> Medium	Class Packet.
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	Currently tailored to officers and senior
	<input type="checkbox"/> Aptitudes	enlisted grades. Each packet is keyed
	<input type="checkbox"/> Schools/Courses	to a related MOS. Future packets may
	<input type="checkbox"/> Training	address lower enlisted grades.
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: D

MEMBER: 1

D.1.10 ADDITIONAL COMMENTS SHEET:

MEMBER: 2

2 | MEMBER: Charts/Display Boards

D.2.2	DESCRIPTION:
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Both charts (if the surface is properly protected) and display boards permit the addition of illustrative markings during the presentation and the "building-up" of the materials at a rate and manner compatible with student learning. Charts, while requiring advance preparation, are generally less bother while being used than projected visuals (though more trouble to store and set up) and can be made any ratio of height to width. Both charts and display boards, while relatively inexpensive to produce and adaptable to a variety of instructional settings and situations, rely heavily on the availability and effectiveness of a live instructor for their teaching potential.

COMMENTS

X Collective Depict group interaction in the field.

FAMILY: D

MEMBER: 2

D.2.3 TRAINING AND EVALUATION (CONT'D)

D.2.3.1 LEVEL OF TRAINING:

COMMENTS

X Unit Organization & Job Duties Adaptable for use at any listed level as a training aid.

X Tool Applications to Unit Job Duties

X Component Procedures

X Task/Situation Practice

X Small-Team

X Larger-Team

X Multi-Unit

X Command Staff Exercise

D.2.3.2 LEVEL OF EVALUATION:

X Module Test Only insofar as used with other teaching instruments.

X Lesson Items



FAMILY: D  
MEMBER: 2

D.2.3.3 LEVEL OF EVALUATION (CONT'D)		COMMENTS
<input type="checkbox"/> Individual Performance/SQT		<u>Can be used with adjunctive material</u>
<input type="checkbox"/> Written		<u>to evaluate individual/collective</u>
		<u>performance.</u>
<input type="checkbox"/> Hands-On		
<input type="checkbox"/> Performance Certification		
<input type="checkbox"/> Team Exercise/ARTEP:		
Positions or echelons		
interacting:		
D.2.4 CAPABILITIES:		
D.2.4.1 PRESENTATION:		
a. Visual		
<input checked="" type="checkbox"/> Alphanumeric		<u>Outlines, sketches, problems, explanations,</u>
<input checked="" type="checkbox"/> Special Symbology		<u>graphs, pie charts.</u>
<input checked="" type="checkbox"/> 2-D Graphics		
<input type="checkbox"/> 3-D Graphics		
<input checked="" type="checkbox"/> Static Displays		
<input type="checkbox"/> Motion		
<input checked="" type="checkbox"/> Color		
b. Auditory		
<input type="checkbox"/> Signals/Tones		
<input type="checkbox"/> Speech		
c. Tactile		
<input type="checkbox"/> Size/Shape		
<input type="checkbox"/> Positional Cues		



FAMILY: DMEMBER: 2

## D.2.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

## c. Sequencing

<input checked="" type="checkbox"/> Linear	<u>Possible to go in any order, but</u>
<input type="checkbox"/> Response Branching	<u>students view same display together.</u>
<input type="checkbox"/> History Branching	<u></u>
<input type="checkbox"/> Repetitive Practice	<u></u>

## d. Recordkeeping

<input type="checkbox"/> Automatic (Temporary Storage)	<u></u>
<input type="checkbox"/> Automatic (Permanent Storage)	<u></u>
<input type="checkbox"/> Manual	<u></u>
<input checked="" type="checkbox"/> None	<u></u>

D.2.5 SETTING:D.2.5.1 ☒ INSTITUTIONAL

<input checked="" type="checkbox"/> Service School	<u>Highly flexible, easy to make and</u>
<input checked="" type="checkbox"/> Army Training Ctr (ATC)	<u>use.</u>
<input checked="" type="checkbox"/> Div/Post Installation Schools	<u></u>

D.2.5.2 ☒ UNIT

<input type="checkbox"/> In-System (Embedded)	<u>Can be used to augment instruction</u>
<input checked="" type="checkbox"/> Job-Station	<u>at the unit level.</u>
<input type="checkbox"/> Individual Learning Ctr (ILC)	<u></u>
<input type="checkbox"/> Barracks/Home	<u></u>
<input checked="" type="checkbox"/> Garrison Training Area	<u></u>
<input checked="" type="checkbox"/> Local Training Area	<u></u>
<input checked="" type="checkbox"/> Major Training	<u></u>
<input checked="" type="checkbox"/> National Range	<u></u>

FAMILY: D  
MEMBER: 2

D.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Material to make chart or display board.</u>
		<u> </u>
		<u> </u>
D.2.6	EXPORTABILITY:	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No <u>(Generally, self-made.)</u>	
D.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u> </u>
	<input type="checkbox"/> Future Date	<u> </u>
	<input type="checkbox"/> Unknown	<u> </u>
D.2.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	<u> </u>
	<input type="checkbox"/> Install	<u> </u>
	<input type="checkbox"/> Remote Access (Telecommunications)	<u> </u>
	<input type="checkbox"/> In System	<u> </u>
	<input type="checkbox"/> Job Materials	<u> </u>
D.2.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u> </u>
	<input type="checkbox"/> Unit Issue	<u> </u>
D.2.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>DA Pamphlet 310-2 or TASC.</u>
	<input type="checkbox"/> Probable	<u> </u>
	<input type="checkbox"/> Unknown	<u> </u>



FAMILY: D

MEMBER: 2

D.2.7	<u>SUPPORT REQUIREMENTS:</u>	
D.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Store materials to make charts, display</u>
	<input type="checkbox"/> Spare Parts	<u>boards.</u>
	<input type="checkbox"/> Additional Copies On Hand	
	<input checked="" type="checkbox"/> Expendable Material	<u>Paper, cloth, plastic sheets, stencils,</u>
D.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	<u>pencils, crayons, felt-tip pens.</u>
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
D.2.7.3	<u>MANNING REQUIREMENTS: Total = 1</u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>One instructor to highlight, augment</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u>and interweave with other infor-</u>
	<input type="checkbox"/> Support Personnel	<u>mation.</u>
D.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input type="checkbox"/> Special Personnel Skills	
	<input type="checkbox"/> Special Equipment	
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY: DMEMBER: 2

D.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
D.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
D.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Subject matter dependent.
	<input type="checkbox"/> None	

FAMILY: D

MEMBER: 2

D.2.10 ADDITIONAL COMMENTS SHEET:

MEMBER: 3

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FAMILY: D

MEMBER: 3

D.3.3 TRAINING AND EVALUATION (CONT'D)

D.3.3.1 LEVEL OF TRAINING:

COMMENTS

X Unit Organization & Job Duties Used to augment instruction/train-  
ing sessions at different  
training levels.

X Tool Applications to Unit  
Job Duties

x Component Procedures

     Task/Situation Practice

     Small-Team

     Larger-Team

     Multi-Unit

X Command Staff Exercise

D.3.3.2 LEVEL OF EVALUATION:

     Module Test

Can be used to present test  
questions or instructions for  
practical exercises.

X Lesson Items

FAMILY: D

MEMBER: 3

D.3.3.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	
	<u>X</u> Written	<u>Only if used to present questions that require a written response.</u>
	<u>    </u> Hands-On	
	<u>    </u> Performance Certification	
	<u>    </u> Team Exercise/ARTEP: Positions or echelons interacting:	
D.3.4	<u>CAPABILITIES:</u>	
D.3.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	<u>Use any character, symbol, or graphic that</u>
	<u>X</u> Special Symbolology	<u>can be drawn on transparency and then</u>
	<u>X</u> 2-D Graphics	<u>projected.</u>
	<u>    </u> 3-D Graphics	
	<u>X</u> Static Displays	
	<u>    </u> Motion	
	<u>X</u> Color	
	b. Auditory	
	<u>    </u> Signals/Tones	
	<u>    </u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

MEMBER: 3

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MEMBER: 3

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MEMBER: 3

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FAMILY: D  
MEMBER: 3

D.3.7	<u>SUPPORT REQUIREMENTS:</u>	
D.3.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>For projector, screen.</u>
	<input type="checkbox"/> Spare Parts	<u></u>
	<input type="checkbox"/> Additional Copies On Hand	<u></u>
	<input checked="" type="checkbox"/> Expendable Material	<u>Acetate, grease pencils, plastic coat-</u>
D.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	<u>ing, cardboard frame.</u>
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u></u>
	<input checked="" type="checkbox"/> Operator	<u>Replace lamps in projector.</u>
	<input type="checkbox"/> Organizational Maintenance	<u></u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
D.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>1</u></u>	
	<input type="checkbox"/> System Operators	<u></u>
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>Acts as system operator to stack,</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u>overlap, cover and expose trans-</u>
	<input type="checkbox"/> Support Personnel	<u>parencies and run projector.</u>
D.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input type="checkbox"/> Special Personnel Skills	<u></u>
	<input type="checkbox"/> Special Equipment	<u></u>
	<input type="checkbox"/> Facility	<u></u>
	<input type="checkbox"/> Reproduction	<u></u>
	<input checked="" type="checkbox"/> Update	<u>As required.</u>

FAMILY: DMEMBER: 3

D.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
D.3.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
D.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Subject matter dependent.</u>
	<input type="checkbox"/> None	

FAMILY: D

MEMBER: 3

D.3.10 ADDITIONAL COMMENTS SHEET:



FAMILY: D  
MEMBER: 4

D	<u>FAMILY:</u> INSTRUCTOR WITH STANDARD AIDS	
4	<u>MEMBER:</u> Models/Mockups	
D.4.1	<u>SOURCE/PROPONENT:</u> Director, Course Development and Trng., USAFAS, TASC, Ft. Sill, and other regional TASCs.	
D.4.2	<u>DESCRIPTION:</u>	
	<p>Models and mock-ups are three-dimensional representations of objects which differ from the real object in size, material, and/or functional capability. They may be constructed in a manner which permits easy disassembly or may be made of transparent materials so that the student may see internal components and their physical and functional relationships. Their most frequent use is to illustrate both static and dynamic spatial relationships. For example, models can be full-size plastic replicas of foreign weapons. Mockups can be three-dimensional mobile canvas silhouettes of foreign vehicles.</p>	
D.4.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	
		<u>COMMENTS</u>
	X Individual	In individual or group settings.
	X Collective	Can be used to support team training.

MEMBER: 4

D.4.3.1 LEVEL OF TRAINING:

## COMMENTS

X Tool Applications to Unit Job Duties an instructor or facilitator to support their use.

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Support interaction among staff  
members.

## Module Test

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FAMILY: D

MEMBER: 4

D.4.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	<u>Support individual performance by</u>
		<u>augmenting other instruction and/or</u>
	<u>X</u> Written	<u>evaluation.</u>
	<u>X</u> Hands-On	
	<u>    </u> Performance Certification	
	<u>X</u> Team Exercise/ARTEP:	<u>Support small team interaction.</u>
	Positions or echelons interacting:	
D.4.4	<u>CAPABILITIES:</u>	
D.4.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	<u>Whatever can be designed into a model or</u>
	<u>X</u> Special Symbology	<u>mockup.</u>
	<u>X</u> 2-D Graphics	
	<u>X</u> 3-D Graphics	
	<u>X</u> Static Displays	
	<u>    </u> Motion	
	<u>X</u> Color	
	b. Auditory	
	<u>    </u> Signals/Tones	
	<u>    </u> Speech	
	c. Tactile	
	<u>X</u> Size/Shape	
	<u>X</u> Positional Cues	

FAMILY:     D    

MEMBER:     4    

D.4.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	___ Choice Selection	_____
	___ Specific Recall	_____
	___ Composed/Created	_____
	b. Performance	
	<u>X</u> Indication	<u>Can be assembled or disassembled or</u>
	<u>X</u> Manipulation	<u>used to augment other instruction.</u>
	___ Read/Interpret	_____
	___ Listen/Interpret	_____
	___ Voice Composition	_____
	___ Situation Evaluation	_____
	___ Decide Action	_____
D.4.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	___ Informative	<u>Under instructor's control</u>
	___ Evaluative	_____
	___ Corrective	_____
	___ Summary	_____
	___ Immediate	_____
	___ Delayed	_____
	b. Presentation Control	
	<u>X</u> Learner	<u>Depends on design and adjunctive</u>
	___ Media	<u>materials.</u>
	<u>X</u> Instructor	_____



FAMILY: D  
MEMBER: 4

D.4.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Materials to construct models/mockups, space to present and</u>
		<u>store them.</u>
D.4.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
D.4.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	
	<input type="checkbox"/> Future Date	
	<input type="checkbox"/> Unknown	
D.4.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
D.4.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	
	<input type="checkbox"/> Unit Issue	
D.4.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Available through the TASC.</u>
	<input type="checkbox"/> Probable	
	<input type="checkbox"/> Unknown	

FAMILY: D

MEMBER: 4

D.4.7	<u>SUPPORT REQUIREMENTS:</u>	
D.4.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Store models/mockups.</u>
	<input type="checkbox"/> Spare Parts	<u></u>
	<input type="checkbox"/> Additional Copies On Hand	<u></u>
	<input type="checkbox"/> Expendable Material	<u></u>
D.4.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u></u>
	<input type="checkbox"/> Operator	<u></u>
	<input type="checkbox"/> Organizational Maintenance	<u></u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
D.4.7.3	<u>MANNING REQUIREMENTS: Total = <u>1</u></u>	
	<input type="checkbox"/> System Operators	<u></u>
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>One to conduct class or training.</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u></u>
	<input type="checkbox"/> Support Personnel	<u></u>
D.4.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input type="checkbox"/> Special Personnel Skills	<u></u>
	<input type="checkbox"/> Special Equipment	<u></u>
	<input type="checkbox"/> Facility	<u></u>
	<input type="checkbox"/> Reproduction	<u></u>
	<input checked="" type="checkbox"/> Update	<u>Incorporate changes or modifications.</u>

FAMILY: DMEMBER: 4

D.4.8	<u>COST DATA:</u>	<u>COMMENTS</u>
D.4.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.4.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.4.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
D.4.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Depends on complexity and design of
	<input type="checkbox"/> None	model/mockup.
D.4.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Task dependent.
	<input type="checkbox"/> None	

FAMILY: D

MEMBER: 4

D.4.10 ADDITIONAL COMMENTS SHEET:



## AUDIO-ONLY

Audio-only may be used as stand-alone material to present instructional sequences or as a supplement to other presentation media. Tape cassettes, reels, and cartridges provide a simple, economic, and convenient means for recording and presenting instructional information in audio form. Tapes are strictly linear in pacing and control except for manual stop, search, and replay. Playback units are small and portable, making them suitable for individual student use in a variety of settings and for providing audio instructions for the performance of paced manual tasks. Playback units may be combined with headphones and microphones and arranged in individual learning carrels, or stations, to function as learning laboratories where students can be presented instructional material and interact via the microphone with an instructor for feedback and/or remediation. Multi-track and random-access units provide limited branching capabilities. Audio tape is flexible for editing, erasure, and re-use; it may also be used to record student responses for later evaluation.

FAMILY: E

MEMBER CHARACTERISTICS TABLE

MEMBER	Training Method		Training Level	Setting		Available Date	Acquisition & Courseware Costs					Presentation			
	I	C	1 - 8	I	U		High Med Low					V	A	T	S
							5	4	3	2	1				
1. TEC Audio-Only	X		4	X	X	Now					X		X		X
2. Language Labs	X	X	5	X		UNK				X			X		X

FAMILY: E  
MEMBER: 1

E	<u>FAMILY:</u> AUDIO ONLY	
1	<u>MEMBER:</u> TEC Audio-Only	
E.1.1	<u>SOURCE/PROPONENT:</u> Director, Course Development & Trng., USAFAS. Initial Issue: TRADOC Trng. Material Support Detach., Tobyhanna, PA. Copies: Chief, Production & Dist., Trng. Programs Directorate (ATSC Ft. Eustis, VA).	
E.1.2	<u>DESCRIPTION:</u> TEC audio-only lessons consist of an audio cassette and student instruction sheet enclosed within a grey plastic TEC lesson box. These tapes may be played on any type cassette player. Each Battalion size unit has 4 portable, battery powered tape players and 8 Beseler Cue/See machines which may be used for the audio lessons. These lessons may also have adjunctive materials such as forms, devices, or manuals for use with the lesson. Audio lessons can "talk" soldiers through performance tasks on equipment, e.g., step-by-step dis-assembly. Each recording is designed to pause for requested student response. Lessons are and may pace the student on tasks with time standards. Responses are performance oriented and suitable for any environment. It is currently distributed to Active, Reserve, and National Guard units by pinpoint distribution.	
E.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	
	<u>COMMENTS</u>	
	<u>X</u> Individual	Address specific tasks within a given soldier's manual. Highly portable to many settings.
	<u>      </u> Collective	<hr/> <hr/> <hr/> <hr/>

FAMILY: E

MEMBER: 1

E.1.3	<u>TRAINING AND EVALUATION</u> (CONT'D)	
E.1.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	<u>Refresher for unit.</u>
	<u>X</u> Tool Applications to Unit Job Duties	<u>If appropriate to unit-specific equipment, aids, references.</u>
	<u>X</u> Component Procedures	<u>Equipment use/maintenance. Use of job tools and references.</u>
	<u>X</u> Task/Situation Practice	<u>Equipment use/maintenance. Use of job tools and references.</u>
	<u>    </u> Small-Team	
	<u>    </u> Larger-Team	
	<u>    </u> Multi-Unit	
	<u>    </u> Command Staff Exercise	
E.1.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<u>Post test - written or can be hands-on performance evaluation.</u>
	<u>X</u> Lesson Items	<u>Enroute test items.</u>



FAMILY: E

MEMBER: 1

E.1.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	<u>Task specific.</u>
	<u>X</u> Written	
	<u>X</u> Hands-On	
	<u>    </u> Performance Certification	
	<u>    </u> Team Exercise/ARTEP:	
	Positions or echelons interacting:	
E.1.4	<u>CAPABILITIES:</u>	
E.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>    </u> Alphanumeric	<u>When combined with use of equipment, aids,</u>
	<u>    </u> Special Symbology	<u>references, training devices.</u>
	<u>    </u> 2-D Graphics	
	<u>    </u> 3-D Graphics	
	<u>    </u> Static Displays	
	<u>    </u> Motion	
	<u>    </u> Color	
	b. Auditory	
	<u>    X</u> Signals/Tones	
	<u>    X</u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	<u>When combined with use of equipment, aids,</u>
	<u>    </u> Positional Cues	<u>references, training devices.</u>

FAMILY: E

MEMBER: 1

E.1.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<u>X</u> Linear	
	<u>    </u> Response Branching	
	<u>    </u> History Branching	
	<u>X</u> Repetitive Practice	
	d. Recordkeeping	
	<u>    </u> Automatic (Temporary Storage)	
	<u>    </u> Automatic (Permanent Storage)	
	<u>X</u> Manual	<u>Required at unit/individual</u>
	<u>    </u> None	<u>option, per Training Management</u>
E.1.5	<u>SETTING:</u>	<u>Plan.</u>
E.1.5.1	<u>X</u> INSTITUTIONAL	
	<u>X</u> Service School	<u>Army environment. See E.1.5.3</u>
	<u>X</u> Army Training Ctr (ATC)	
	<u>X</u> Div/Post Installation Schools	
E.1.5.2	<u>X</u> UNIT	
	<u>X</u> In-System (Embedded)	
	<u>X</u> Job-Station	
	<u>X</u> Individual Learning Ctr (ILC)	
	<u>X</u> Barracks/Home	
	<u>X</u> Garrison Training Area	
	<u>X</u> Local Training Area	
	<u>    </u> Major Training	
	<u>    </u> National Range	

FAMILY: E

MEMBER: 1

E.1.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Space to set up audio equipment (Califone Tape Cassette) and</u>
		<u>any associated equipment, references, aids, or devices.</u>
E.1.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
E.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	
	<input type="checkbox"/> Future Date	
	<input type="checkbox"/> Unknown	
E.1.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	<u>TRADOC Trng. Material Support Detach.,</u>
	<input type="checkbox"/> Install	<u>Tobyhanna, PA</u>
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
E.1.6.3	BASIS OF ISSUE:	
	<input type="checkbox"/> On Demand	
	<input checked="" type="checkbox"/> Unit Issue	<u>Pinpoint distribution. Four cassette</u>
		<u>players per Battalion.</u>
E.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Issue: Trng. Materials Detachment,</u>
	<input type="checkbox"/> Probable	<u>Tobyhanna, PA</u>
	<input type="checkbox"/> Unknown	<u>Lessons: Chief, Prod. &amp; Distribution,</u>
		<u>Trng Programs Directorate,</u>
		<u>ATSC, Ft. Eustis, VA</u>

MEMBER: 1

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FAMILY: EMEMBER: 1

<u>E.1.8</u>	<u>COST DATA:</u>	<u>COMMENTS</u>
<u>E.1.8.1</u>	<u>SYSTEM ACQUISITION:</u>	
	<u>High</u>	
	<u>Medium</u>	
	<u>X</u> <u>Low</u>	<u>Cost of materiel to Army.</u>
	<u>X</u> <u>None</u>	<u>Basis of issue to units.</u>
<u>E.1.8.2</u>	<u>CURRENT OR PROJECTED OPERATIONAL COSTS:</u>	
	<u>High</u>	
	<u>Medium</u>	
	<u>X</u> <u>Low</u>	<u>Per user session.</u>
	<u>None</u>	
<u>E.1.8.3</u>	<u>MAINTENANCE COSTS:</u>	
	<u>High</u>	
	<u>Medium</u>	
	<u>X</u> <u>Low</u>	<u>Less than \$50/day.</u>
	<u>None</u>	
<u>E.1.8.4</u>	<u>TRAINING MATERIALS DEVELOPMENT:</u>	
	<u>High</u>	
	<u>Medium</u>	
	<u>X</u> <u>Low</u>	<u>Approximately \$1.5-2K/lesson (30-120</u>
	<u>None</u>	<u>minutes), or 35:1 ratio (development</u>
<u>E.1.9</u>	<u>TRAINEE PREREQUISITES:</u>	<u>hrs/lesson hr).</u>
	<u>Education</u>	
	<u>Physical Skills</u>	
	<u>Mental Skills</u>	
	<u>MOS Requirements</u>	
	<u>Aptitudes</u>	
	<u>Schools/Courses</u>	
	<u>Training</u>	
	<u>X</u> <u>Other</u>	<u>Task dependent.</u>
	<u>None</u>	

FAMILY: E

MEMBER: 1

E.1.10 ADDITIONAL COMMENTS SHEET:

FAMILY: E  
MEMBER: 2

E	<u>FAMILY:</u> AUDIO ONLY					
2	<u>MEMBER:</u> Language Labs (GEL)					
E.2.1	<u>SOURCE/PROPONENT:</u> Director, Course Development and Trng., USAFAS Logistical Support - Local TASC					
E.2.2	<u>DESCRIPTION:</u> Twenty-station, audio-active language lab by GEL used mostly for English language training/reinforcement of USAFAS allied students. System includes audio tape and headphones with attached microphone. Only one instructor is required to run equipment, correct student, and control learning. There are no plans for export of the system or components.					
E.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>  <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0"> <tr> <td><u>X</u> Individual</td> <td><u>Individual learning stations for audio-only sub-</u> <u>jects. Primary application includes English</u> <u>language training. Can be used for multi-lingual</u></td> </tr> <tr> <td><u>X</u> Collective</td> <td><u>and cross-cultural interaction training of soldiers</u> <u>for specialized unit missions and theatres of opera-</u> <u>tion. Permits at least simulated collective</u></td> </tr> </table> <div style="text-align: right;">(Cont'd on next page)</div>		<u>X</u> Individual	<u>Individual learning stations for audio-only sub-</u> <u>jects. Primary application includes English</u> <u>language training. Can be used for multi-lingual</u>	<u>X</u> Collective	<u>and cross-cultural interaction training of soldiers</u> <u>for specialized unit missions and theatres of opera-</u> <u>tion. Permits at least simulated collective</u>
<u>X</u> Individual	<u>Individual learning stations for audio-only sub-</u> <u>jects. Primary application includes English</u> <u>language training. Can be used for multi-lingual</u>					
<u>X</u> Collective	<u>and cross-cultural interaction training of soldiers</u> <u>for specialized unit missions and theatres of opera-</u> <u>tion. Permits at least simulated collective</u>					

FAMILY: E

MEMBER: 2

E.2.3

TRAINING AND EVALUATION APPLICATIONS (Cont't)

communications training between student and instructor. Could be re-configured for inter-station netted communications. Audio-only stations and tapes could be used for other types of training.



FAMILY: E

MEMBER: 2

E.2.3 TRAINING AND EVALUATION (CONT'D)

E.2.3.1 LEVEL OF TRAINING:

COMMENTS

X Unit Organization & Job Duties Multi-lingual communications and cross-cultural interaction skills.

     Tool Applications to Unit Job Duties

     Component Procedures

X Task/Situation Practice

X Small-Team

At least student-trainer communications, where trainer

     Larger-Team

simulates communications net.

     Multi-Unit

     Command Staff Exercise

E.2.3.2 LEVEL OF EVALUATION:

     Module Test

X Lesson Items

Can have test items which require overt or covert oral responses.

MEMBER: 2

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MEMBER: 2

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FAMILY: E  
MEMBER: 2

E.2.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<u>X</u> Linear	Pre-programmed tapes. Tape and indivi-
	<u>X</u> Response Branching	dual requirements under control of
	<u>    </u> History Branching	instructor.
	<u>X</u> Repetitive Practice	
	d. Recordkeeping	
	<u>    </u> Automatic (Temporary Storage)	
	<u>    </u> Automatic (Permanent Storage)	
	<u>    </u> Manual	
	<u>X</u> None	Unless implemented by instructor.
E.2.5	<u>SETTING:</u>	
E.2.5.1	<u>X</u> INSTITUTIONAL	
	<u>X</u> Service School	Available at USAFAS
	<u>    </u> Army Training Ctr (ATC)	
	<u>    </u> Div/Post Installation Schools	
E.2.5.2	<u>X</u> UNIT	
	<u>    </u> In-System (Embedded)	
	<u>    </u> Job-Station	
	<u>X</u> Individual Learning Ctr (ILC)	Feasible, but no plans exist.
	<u>    </u> Barracks/Home	
	<u>X</u> Garrison Training Area	
	<u>    </u> Local Training Area	
	<u>    </u> Major Training	
	<u>    </u> National Range	



MEMBER: 2

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FAMILY: E  
MEMBER: 2

E.2.7	<u>SUPPORT REQUIREMENTS:</u>	
E.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>House equipment and tapes.</u>
	<input checked="" type="checkbox"/> Spare Parts	<u>Support from TASC.</u>
	<input checked="" type="checkbox"/> Additional Copies On Hand	
	<input type="checkbox"/> Expendable Material	
E.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>Support from TASC.</u>
	<input checked="" type="checkbox"/> Operator	<u>Minor equipment adjustments.</u>
	<input type="checkbox"/> Organizational Maintenance	
	<input checked="" type="checkbox"/> Direct Support Maintenance	<u>Repair or replace audio equipment.</u>
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
E.2.7.3	<u>MANNING REQUIREMENTS: Total = <u>1</u></u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>One instructor to operate lab.</u>
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
E.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>Language/cross-cultural skills.</u>
	<input checked="" type="checkbox"/> Special Equipment	<u>Audio-only design and production for</u>
	<input type="checkbox"/> Facility	<u>new training requirements.</u>
	<input checked="" type="checkbox"/> Reproduction	<u>Tape mastering and replication.</u>
	<input type="checkbox"/> Update	

FAMILY: EMEMBER: 2

E.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
E.2.8.1	SYSTEM ACQUISITION:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>  X  </u> Low	\$1K each student station. 20K for entire system.
	<u>    </u> None	
E.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>  X  </u> Low	Primarily instructor time.
	<u>    </u> None	
E.2.8.3	MAINTENANCE COSTS:	
	<u>    </u> High	
	<u>    </u> Medium	
	<u>  X  </u> Low	Minimal
	<u>    </u> None	
E.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<u>    </u> High	
	<u>  X  </u> Medium	For new developmental work.
	<u>    </u> Low	
	<u>  X  </u> None	None developed in last 8 years.
E.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<u>    </u> Education	
	<u>    </u> Physical Skills	
	<u>    </u> Mental Skills	
	<u>    </u> MOS Requirements	
	<u>    </u> Aptitudes	
	<u>    </u> Schools/Courses	
	<u>    </u> Training	
	<u>    </u> Other	
	<u>  X  </u> None	

FAMILY: E

MEMBER: 2

E.2.10 ADDITIONAL COMMENTS SHEET:



## AUDIO VISUAL

Audio visual may be used in a stand-alone form to present instructional sequences or as a supplement to other presentation media. There are several categories:

Filmstrips and Sound-Filmstrips. Filmstrip projectors permit the projection of a still series of color or black-and-white pictures. They may use 35mm motion or slide film, 16mm or 8mm film cartridges, or continuous loop filmstrips. Audio may be incorporated by discs or audio tape cassettes with audio program synch and control signals. While the instructional sequence is fixed, the presentation time is under operator control.

Filmstrips offer the full range of photographic techniques, ease of storage and handling, and production gear is easy and inexpensive to use. Sound-filmstrip production requires special equipment, with the control signals and sound track programmed independent of the film. Modifying a visual-audio sequence is not easy and combining sound with filmstrip usually eliminates the picture "freeze" capability. There is no inherent or readily adaptable student response capability with filmstrips.

Slides and Sound-Slides. Slides provide a film transparency with the full range of still photography techniques, usually 35mm in 2" X 2" mounts; slide presentations normally employ slide magazines of varying capacities, with the presentation rate under manual or automatic control. Sound-slide presentations use integrators/synchronizers to integrate tape recorders with slide projectors. Some projectors permit the presentation to be stopped while the student performs a task, practices a skill, does a workbook exercise, or answers a question. Special responder devices are available which enable presentation re-start when a correct response has been given by the student; random-access units permit selective review or branching for individual or group presentations.

Slides permit ease of program rearrangement or update, whereas sound-slide fixes the display time and limits the ease of program. Cartridge projectors

#### AUDIO VISUAL (Cont'd)

offer simplicity of operation and longer film life than do reel-to-reel projectors. Films lack a student response and scoring capability (unless with programmed or facilitator-control stop and student response sheets), require darkness for presentation, provide displays at a fixed rate for all viewers, and are comparatively expensive to produce and update.

Motion Pictures and Sound Motion Pictures. Motion pictures can provide continuity of action, an illusion of motion, slow-motion, control of demonstration speed or aspect angle, time-lapse action, time compression, and timed focus on an event when such features are important to a training requirement. Formats are usually 16mm, 8mm, or super-8. Sound is incorporated using magnetic or optical sound tracks.



FAMILY: F  
MEMBER: 1

F	<u>FAMILY:</u> AUDIO VISUAL	
1	<u>MEMBER:</u> TEC Audio/Visual (BESELER CUE/SEE)	
F.1.1	<u>SOURCE/PROPONENT:</u> Director, Course Development & Training, USAFAS.	
	Initial Issue: TRADOC Training Material Support Detach., Tobyhanna, PA.	
	Copies: Chief, Production & Dist., Trng Programs Directorate, ATSC,	
F.1.2	<u>DESCRIPTION:</u> Ft. Eustis, VA.	
	<p>TEC audio/visual consists of continuous loop 8mm color film strip driven by an audio cassette. One lesson consists of one 8mm film strip; one audio cassette; one student instruction sheet pasted to inside cover of a gray plastic box which houses the lesson. This type of lesson is designed to play/operate with the Beseler Cue/See viewing machine. Lesson may also include adjunctive material such as TMs, FMs, and blank forms which support the lesson by providing hands-on application. Designed to prepare student for SQT and/or ARTEP. It is usable virtually at any location with a power source compatible with the Beseler Cue/See. Currently in use at Active, Reserve, and National Guard units, USAR schools, and ROTC schools. While only one instructor is required to run the media-paced instruction, a staff must be maintained to update programmed training materials.</p> <p>Adaptation to an individual student's needs is provided by use of the Cue/See's pause-proceed system. With it, the film and audio instruction are stopped by a programmed signal to allow the student time for "hands-on" skill practice exercises or written responses to questions. The student can reactivate the program at will by merely pressing the Cue/See proceed button. By using a "Responder" accessory, multiple-choice questions can be presented during the programmed pause. The program will then resume only after the correct answer is given.</p>	
F.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	
	<u>COMMENTS</u>	
	<u>X</u> Individual	<u>Each TEC lesson is keyed to a task or task group in</u> <u>Soldier's Manuals. Group projection &amp; audio, or</u> <u>headphones for private self-study.</u>
	<u>X</u> Collective	<u>Small-group projection &amp; audio permits teamwork in</u> <u>solving problems, e.g., leadership workshop.</u>



FAMILY: F  
MEMBER: 1

F.1.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
F.1.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	<u>Refresher, if applicable to unit-specific requirements.</u>
	<u>X</u> Tool Applications to Unit Job Duties	<u>For basic tools used in unit tasks.</u>
	<u>X</u> Component Procedures	
	<u>X</u> Task/Situation Practice	<u>Practical exercise in certain tasks.</u>
	<u>X</u> Small-Team	<u>Project team problem on large screen.</u>
	<u>    </u> Larger-Team	
	<u>    </u> Multi-Unit	
	<u>    </u> Command Staff Exercise	
F.1.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<u>Programmed pauses to test student.</u>
	<u>X</u> Lesson Items	<u>Written Pre and Post test.</u>
		<u>Enroute test items.</u>

FAMILY: F

MEMBER: 1

F.1.3	LEVEL OF EVALUATION (CONT'D)		
		<u>COMMENTS</u>	
	<u>X</u> Individual Performance/SQT	Practical exercise for SQT preparation.	
	<u>X</u> Written		
	<u>X</u> Hands-On	Depends on task.	
	<u>    </u> Performance Certification		
	<u>X</u> Team Exercise/ARTEP:	Practical exercise for ARTEP preparation.	
	Positions or echelons		
	interacting:	Small team, depends on task.	
F.1.4	<u>CAPABILITIES:</u>		
F.1.4.1	<u>PRESENTATION:</u>		
	a. Visual		
	<u>X</u> Alphanumeric		
	<u>X</u> Special Symbology		
	<u>X</u> 2-D Graphics	Can simulate 3-D.	
	<u>    </u> 3-D Graphics		
	<u>X</u> Static Displays	Programmed to stop until proceed button pushed.	
	<u>X</u> Motion	Up to 24 frames/second.	
	<u>X</u> Color		
	b. Auditory		
	<u>X</u> Signals/Tones		
	<u>X</u> Speech	Sound cassettes separate from film cassettes.	
	c. Tactile		
	<u>    </u> Size/Shape		
	<u>    </u> Positional Cues		

FAMILY: F  
MEMBER: 1

F.1.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>X</u> Choice Selection	Verbal, written, and/or performance,
	<u>X</u> Specific Recall	as programmed in the lesson - lends
	<u>X</u> Composed/Created	itself to multiple-choice.
	b. Performance	
	<u>    </u> Indication	Depends on performance task.
	<u>    </u> Manipulation	Performance must be compared with
	<u>X</u> Read/Interpret	lesson or checked by observer.
	<u>X</u> Listen/Interpret	
	<u>    </u> Voice Composition	
	<u>X</u> Situation Evaluation	
	<u>X</u> Decide Action	
F.1.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	<u>X</u> Informative	Student can press "proceed" button only.
	<u>X</u> Evaluative	Only if student attempts response.
	<u>X</u> Corrective	
	<u>    </u> Summary	
	<u>X</u> Immediate	
	<u>X</u> Delayed	
	b. Presentation Control	
	<u>X</u> Learner	Push proceed button to advance.
	<u>X</u> Media	Built-in, pace designed for self-
	<u>    </u> Instructor	taught lesson.

FAMILY: F  
MEMBER: 1

F.1.4.3	TRAINING MANAGEMENT (CONT'D)	<u>COMMENTS</u>
	c. Sequencing	
	<input checked="" type="checkbox"/> Linear	
	<input type="checkbox"/> Response Branching	
	<input type="checkbox"/> History Branching	
	<input checked="" type="checkbox"/> Repetitive Practice	May be given a series of problems.
	d. Recordkeeping	
	<input type="checkbox"/> Automatic (Temporary Storage)	
	<input type="checkbox"/> Automatic (Permanent Storage)	
	<input checked="" type="checkbox"/> Manual	Required/optional per Trng. Mgmt. Plan.
	<input checked="" type="checkbox"/> None	
F.1.5	<u>SETTING:</u>	
F.1.5.1	<input checked="" type="checkbox"/> INSTITUTIONAL	
	<input checked="" type="checkbox"/> Service School	See F.1.5.3.
	<input type="checkbox"/> Army Training Ctr (ATC)	
	<input type="checkbox"/> Div/Post Installation Schools	
F.1.5.2	<input checked="" type="checkbox"/> UNIT Active, Reserve, and National Guard units.	
	<input type="checkbox"/> In-System (Embedded)	
	<input checked="" type="checkbox"/> Job-Station	See F.1.5.3.
	<input checked="" type="checkbox"/> Individual Learning Ctr (ILC)	
	<input checked="" type="checkbox"/> Barracks/Home	
	<input checked="" type="checkbox"/> Garrison Training Area	
	<input checked="" type="checkbox"/> Local Training Area	
	<input type="checkbox"/> Major Training	
	<input type="checkbox"/> National Range	



FAMILY: F

MEMBER: 1

F.1.5.3	<input checked="" type="checkbox"/> REQUIREMENTS: <u>COMMENTS</u> <u>Power source compatible with the Beseler Cue/See: 105-130 volts</u> <u>AC. 60Hz, 30-100 watts. Use in field with portable electric</u> <u>generator.</u>
F.1.6	<u>EXPORTABILITY:</u> <input checked="" type="checkbox"/> In Units <u>Planning</u> <u>No</u>
F.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE: <input checked="" type="checkbox"/> Currently Available _____ <input type="checkbox"/> Future Date _____ <input type="checkbox"/> Unknown _____
F.1.6.2	METHOD: <input checked="" type="checkbox"/> Mail/Ship <u>TRADOC, Trng. Material Support Detach., Tobyhanna, PA.</u> <input type="checkbox"/> Install _____ <input type="checkbox"/> Remote Access (Telecommunications) _____ <input type="checkbox"/> In System _____ <input type="checkbox"/> Job Materials _____
F.1.6.3	BASIS OF ISSUE: <input type="checkbox"/> On Demand _____ <input checked="" type="checkbox"/> Unit Issue <u>Per distribution plan. 8 Cue/See devices and 4</u> <u>viewing screens per battalion.</u>
F.1.6.4	SOURCE: <input checked="" type="checkbox"/> Known <u>Issue: TRADOC Trng. Materials Detach., Tobyhanna, PA.</u> <input type="checkbox"/> Probable <u>Lessons: Chief, Prod. &amp; Dist., Trng. Programs</u> <input type="checkbox"/> Unknown <u>Directorate, ATSC, Ft. Eustis, VA</u>

FAMILY: FMEMBER: 1

F.1.7	<u>SUPPORT REQUIREMENTS:</u>	
F.1.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Beseler Cue/See, A/V kits, screens.</u>
	<input checked="" type="checkbox"/> Spare Parts	<u>Lamps for Beseler Cue/See.</u>
	<input type="checkbox"/> Additional Copies On Hand	<u></u>
	<input type="checkbox"/> Expendable Material	<u></u>
F.1.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>Provided by the Trng. Aids Office</u>
	<input type="checkbox"/> Operator	<u>supporting each unit.</u>
	<input type="checkbox"/> Organizational Maintenance	<u></u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
F.1.7.3	<u>MANNING REQUIREMENTS: Total = <u>1</u></u>	
	<input type="checkbox"/> System Operators	<u></u>
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>Librarian for materials.</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u></u>
	<input type="checkbox"/> Support Personnel	<u></u>
F.1.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>Staff of officers/civilians with de-</u>
	<input checked="" type="checkbox"/> Special Equipment	<u>velopmental skills in programmed trng.</u>
	<input type="checkbox"/> Facility	<u>materials. Standard photographic gear.</u>
	<input type="checkbox"/> Reproduction	<u>Access to audio cassette recording,</u>
	<input type="checkbox"/> Update	<u>pulsing, &amp; reproduction gear unless</u>
		<u>contracted out.</u>

FAMILY: F

MEMBER: 1

F.1.10 ADDITIONAL COMMENTS SHEET:

FAMILY: F  
MEMBER: 2

F	<u>FAMILY:</u> AUDIO VISUAL													
2	<u>MEMBER:</u> Slides/Sound Slides													
F.2.1	<u>SOURCE/PROPONENT:</u> Director, Course Development and Trng., USAFAS. Chief, Audio Visual, Trng. Programs Directorate (ATTSC-TP), Ft. Eustis, VA													
F.2.2	<u>DESCRIPTION:</u> Slides provide a film transparency with the full range of still photography techniques, usually 35mm in 2" x 2" mounts; slide presentations normally employ slide magazines of varying capacities, with the presentation rate under manual or automatic control. Sound-slide systems such as the Singer Caramate available at USAFAS, use integrators/synchronizers to integrate tape recorders with slide projectors. Some projectors permit the presentation to be stopped while the student performs a task, practices a skill, does a workbook exercise, or answers a question. Special responder devices are available which enable presentation restart when a correct response has been given by the student; random-access units permit selective review or branching for individual or group presentations. Slides permit ease of program rearrangement or update, whereas sound-slide fixes the display time and limits the ease of program redesign. A particular problem encountered in the use of sound-slide presentations is the loss of synchronization between the visual and sound segments unless a pulsing technique is used to maintain proper synchronization, particularly during rewind and fast-forward operations. Slide and sound-slide units are relatively portable and little space is required for media storage.													
F.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right; margin-right: 50px;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 30%; vertical-align: top;"> <u>X</u> Individual         </td> <td style="border-bottom: 1px solid black; width: 70%;">One unit per student or shown to a group.</td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;">Standardized presentation.</td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td style="vertical-align: top;">           _____ Collective         </td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;"></td> </tr> <tr> <td></td> <td style="border-bottom: 1px solid black;"></td> </tr> </table>		<u>X</u> Individual	One unit per student or shown to a group.		Standardized presentation.			_____ Collective					
<u>X</u> Individual	One unit per student or shown to a group.													
	Standardized presentation.													
_____ Collective														



FAMILY: F  
MEMBER: 2

F.2.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
F.2.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	<u>Depends on content of program.</u>
	<u>X</u> Tool Applications to Unit Job Duties	
	<u>X</u> Component Procedures	
	<u>      </u> Task/Situation Practice	
	<u>      </u> Small-Team	
	<u>      </u> Larger-Team	
	<u>      </u> Multi-Unit	
	<u>      </u> Command Staff Exercise	
F.2.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<u>Can be stopped during presenta-</u> <u>tion to test student.</u>
	<u>X</u> Lesson Items	

FAMILY: F

MEMBER: 2

F.2.3.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	
	<u>X</u> Written	Normally after presentation of program.
	<u>    </u> Hands-On	
	<u>    </u> Performance Certification	
	<u>    </u> Team Exercise/ARTEP:	
	Positions or echelons interacting:	
F.2.4	<u>CAPABILITIES:</u>	
F.2.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	Whatever instructional material that can be photographed or prepared for slide presentation.
	<u>X</u> Special Symbology	
	<u>X</u> 2-D Graphics	
	<u>X</u> 3-D Graphics	
	<u>X</u> Static Displays	
	<u>    </u> Motion	
	<u>X</u> Color	
	b. Auditory	
	<u>X</u> Signals/Tones	Sound slides.
	<u>X</u> Speech	On a separate track from visual display.
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

FAMILY: F  
MEMBER: 2

F.2.4.2	RESPONSE:	<u>COMMENTS</u>
a. Verbal/Symbolic		
<u>X</u>	Choice Selection	Program can require different types
<u>X</u>	Specific Recall	of response during pause of presenta-
<u>X</u>	Composed/Created	tion.
b. Performance		
___	Indication	As determined by an instructor.
___	Manipulation	
<u>X</u>	Read/Interpret	
<u>X</u>	Listen/Interpret	
___	Voice Composition	
___	Situation Evaluation	
___	Decide Action	
F.2.4.3 TRAINING MANAGEMENT:		
a. Feedback		
<u>X</u>	Informative	Subsequent slide can provide correct
___	Evaluative	response to user.
<u>X</u>	Corrective	Requires user to make evaluation based
___	Summary	on data provided in subsequent slide.
<u>X</u>	Immediate	Only if subsequent slide provides
___	Delayed	feedback.
b. Presentation Control		
<u>X</u>	Learner	Some machines paced by student/
<u>X</u>	Media	instructor.
<u>X</u>	Instructor	Others present material independent
		of viewers.

FAMILY: F

MEMBER: 2

F.2.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

c. Sequencing

- X Linear \_\_\_\_\_
- X Response Branching Need random access unit.
- \_\_\_\_ History Branching \_\_\_\_\_
- X Repetitive Practice Presentation not controlled by response.

d. Recordkeeping

- \_\_\_\_ Automatic (Temporary Storage) \_\_\_\_\_
- \_\_\_\_ Automatic (Permanent Storage) \_\_\_\_\_
- \_\_\_\_ Manual \_\_\_\_\_
- X None \_\_\_\_\_

F.2.5 SETTING:

F.2.5.1 X INSTITUTIONAL

- X Service School Can be used wherever slides/sound
- X Army Training Ctr (ATC) slides can function. USAFAS and
- X Div/Post Installation other service schools make extensive
- Schools use of the Singer Caramate sound/
- slide system.

F.2.5.2 X UNIT

- \_\_\_\_ In-System (Embedded) Can be used wherever slide/sound
- X Job-Station slide can be presented.
- X Individual Learning Ctr (ILC) \_\_\_\_\_
- \_\_\_\_ Barracks/Home \_\_\_\_\_
- X Garrison Training Area \_\_\_\_\_
- \_\_\_\_ Local Training Area \_\_\_\_\_
- \_\_\_\_ Major Training \_\_\_\_\_
- \_\_\_\_ National Range \_\_\_\_\_



FAMILY: F  
MEMBER: 2

F.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Slide projector and power for operation. For example, Singer</u>
		<u>Caramate sound/slide system.</u>
F.2.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
F.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u>Singer Caramate system at USAFAS.</u>
	<input type="checkbox"/> Future Date	<u>Others in units.</u>
	<input type="checkbox"/> Unknown	
F.2.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
F.2.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u>Sound/slide programs.</u>
	<input checked="" type="checkbox"/> Unit Issue	<u>Equipment.</u>
F.2.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Varies as to proponent of specific program.</u>
	<input type="checkbox"/> Probable	<u>Chief, Production &amp; Dist. Trng.,</u>
	<input type="checkbox"/> Unknown	<u>Programs Directorate (ATTSC-TP),</u>
		<u>Ft. Eustis, VA</u>

FAMILY: F  
MEMBER: 2

F.2.7	<u>SUPPORT REQUIREMENTS:</u>	
F.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Minimum space.</u>
	<input checked="" type="checkbox"/> Spare Parts	<u>Lamps for projector.</u>
	<input type="checkbox"/> Additional Copies On Hand	<u></u>
	<input type="checkbox"/> Expendable Material	<u></u>
F.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u></u>
	<input checked="" type="checkbox"/> Operator	<u>Maintain projector</u>
	<input type="checkbox"/> Organizational Maintenance	<u></u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
F.2.7.3	<u>MANNING REQUIREMENTS: Total = 0 - 1</u>	
	<input type="checkbox"/> System Operators	<u></u>
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>None for self-paced instruction, one</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u>for classroom presentation to also</u>
	<input type="checkbox"/> Support Personnel	<u>act as system operator.</u>
F.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input type="checkbox"/> Special Personnel Skills	<u>May be required to rearrange or update</u>
	<input checked="" type="checkbox"/> Special Equipment	<u>slides. For sound, need acceptable</u>
	<input type="checkbox"/> Facility	<u>narrator.</u>
	<input type="checkbox"/> Reproduction	<u></u>
	<input type="checkbox"/> Update	<u></u>

FAMILY: F  
MEMBER: 2

F.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
F.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Per lesson or slide presentation.
	<input type="checkbox"/> None	
F.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
F.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
F.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input checked="" type="checkbox"/> Medium	With experienced personnel to produce
	<input type="checkbox"/> Low	45-60 minute presentation.
	<input type="checkbox"/> None	
F.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input checked="" type="checkbox"/> Aptitudes	Reading ability.
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Task dependent.
	<input type="checkbox"/> None	

FAMILY: F

MEMBER: 2

F.2.10 ADDITIONAL COMMENTS SHEET:



FAMILY: F  
MEMBER: 3

F	<u>FAMILY:</u> AUDIO VISUAL																		
3	<u>MEMBER:</u> Army Training Films																		
F.3.1	<u>SOURCE/PROPONENT:</u> Training Aids Service Office																		
F.3.2	<p><u>DESCRIPTION:</u></p> <p>Army Training films can provide continuity of action, an illusion of motion, slow-motion, control of demonstration, speed, or aspect angle, time-lapse action, time compression, and timed focus on an event when such features are important to a training requirement. Formats are usually 16mm, 8mm, or super-8. Sound is incorporated using magnetic or optical sound tracks.</p> <p>Cartridge projectors offer simplicity of operation and longer film life than do reel-to-reel projectors. Films lack a student response and scoring capability (unless with programmed or facilitator-control stop and student response sheets), require darkness for presentation, provide displays at a fixed rate for all viewers, and are comparatively expensive to produce and update.</p> <p>Another consideration is that films are generally produced for a general audience with more material covered than may be necessary for task/situation. In addition, films are quickly outdated. In either case, the instructor must be sure to guide the student along.</p>																		
F.3.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <table border="0"> <thead> <tr> <th colspan="2"></th> <th><u>COMMENTS</u></th> </tr> </thead> <tbody> <tr> <td><u>X</u></td> <td>Individual</td> <td>Usually presented to individuals in a classroom setting.</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td>Collective</td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </tbody> </table>			<u>COMMENTS</u>	<u>X</u>	Individual	Usually presented to individuals in a classroom setting.					Collective							
		<u>COMMENTS</u>																	
<u>X</u>	Individual	Usually presented to individuals in a classroom setting.																	
	Collective																		

MEMBER: 3

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FAMILY: F  
MEMBER: 3

F.3.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	Film can be viewed individually or
	<u>X</u> Written	in a group mode. Testing of material
	<u>    </u> Hands-On	by viewer can be done after viewing
	<u>    </u> Performance Certification	session using written test or
	<u>    </u> Team Exercise/ARTEP:	instructor conducted test.
	Positions or echelons	
	interacting:	
F.3.4	<u>CAPABILITIES:</u>	
F.3.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	Whatever can be photographed and presented
	<u>X</u> Special Symbolology	in a film.
	<u>X</u> 2-D Graphics	
	<u>X</u> 3-D Graphics	
	<u>X</u> Static Displays	Under control of film operator.
	<u>X</u> Motion	Apparent motion.
	<u>X</u> Color	
	b. Auditory	
	<u>X</u> Signals/Tones	
	<u>X</u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

MEMBER: 3

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FAMILY: F  
MEMBER: 3

F.3.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<u>X</u> Linear	
	<u>    </u> Response Branching	
	<u>    </u> History Branching	
	<u>    </u> Repetitive Practice	
	d. Recordkeeping	
	<u>    </u> Automatic (Temporary Storage)	
	<u>    </u> Automatic (Permanent Storage)	
	<u>    </u> Manual	
	<u>X</u> None	
F.3.5	<u>SETTING:</u>	
F.3.5.1	<u>X</u> INSTITUTIONAL	
	<u>X</u> Service School	<u>Can be used wherever films can be</u>
	<u>X</u> Army Training Ctr (ATC)	<u>shown.</u>
	<u>X</u> Div/Post Installation Schools	
F.3.5.2	<u>X</u> UNIT	
	<u>    </u> In-System (Embedded)	<u>Can be used wherever films can be</u>
	<u>X</u> Job-Station	<u>shown.</u>
	<u>X</u> Individual Learning Ctr (ILC)	
	<u>    </u> Barracks/Home	
	<u>X</u> Garrison Training Area	
	<u>    </u> Local Training Area	
	<u>    </u> Major Training	
	<u>    </u> National Range	

FAMILY: F

MEMBER: 3

F.3.5.3	<u>X</u> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Room to set up equipment and wall/screen for viewing.</u>
		<u> </u>
		<u> </u>
F.3.6	<u>EXPORTABILITY:</u>	
	<u>X</u> In Units <u> </u> Planning <u> </u> No <u> </u>	<u> </u>
F.3.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>X</u> Currently Available	<u> </u>
	<u> </u> Future Date	<u> </u>
	<u> </u> Unknown	<u> </u>
F.3.6.2	METHOD:	
	<u>X</u> Mail/Ship	<u> </u>
	<u> </u> Install	<u> </u>
	<u> </u> Remote Access (Telecommunications)	<u> </u>
	<u> </u> In System	<u> </u>
	<u> </u> Job Materials	<u> </u>
F.3.6.3	BASIS OF ISSUE:	
	<u>X</u> On Demand	<u>Films</u>
	<u>X</u> Unit Issue	<u>Projectors</u>
F.3.6.4	SOURCE:	
	<u>X</u> Known	<u>Training Aids Service Office.</u>
	<u> </u> Probable	<u> </u>
	<u> </u> Unknown	<u> </u>

FAMILY: F  
 MEMBER: 3

F.3.7	<u>SUPPORT REQUIREMENTS:</u>	
F.3.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>X</u> Storage Areas	<u>For projector, reels.</u>
	<u>X</u> Spare Parts	<u>Lamp for projector.</u>
	<u>    </u> Additional Copies On Hand	<u>                                </u>
	<u>    </u> Expendable Material	<u>                                </u>
F.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>    </u> No	<u>                                </u>
	<u>X</u> Operator	<u>Change lamp in projector.</u>
	<u>    </u> Organizational Maintenance	<u>                                </u>
	<u>X</u> Direct Support Maintenance	<u>To repair projector and film.</u>
	<u>    </u> General Support Maintenance	<u>                                </u>
	<u>    </u> Depot Maintenance	<u>                                </u>
F.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>2</u></u>	
	<u>X</u> System Operators	<u>One (for projector).</u>
	<u>X</u> Instructors/Facilitators	<u>One (for course).</u>
	<u>    </u> Simulation/Monitor Positions	<u>                                </u>
	<u>    </u> Support Personnel	<u>                                </u>
F.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> Special Personnel Skills	<u>Only if films locally produced.</u>
	<u>X</u> Special Equipment	<u>Motion picture cameras, sets, as required</u>
	<u>X</u> Facility	<u>to produce films. Movie sets, develop</u>
	<u>    </u> Reproduction	<u>film, repair film.</u>
	<u>    </u> Update	<u>                                </u>

FAMILY: FMEMBER: 3

F.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
F.3.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Projector and screen, sound equipment.</u>
	<input type="checkbox"/> None	
F.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Operate projector, store film material.</u>
	<input type="checkbox"/> None	
F.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>For projector.</u>
	<input type="checkbox"/> None	
F.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input checked="" type="checkbox"/> High	<u>Expensive to produce sound films.</u>
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
F.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input checked="" type="checkbox"/> Aptitudes	<u>Minimal reading comprehension.</u>
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Task dependent.</u>
	<input type="checkbox"/> None	



FAMILY: F  
MEMBER: 3

F.3.10 ADDITIONAL COMMENTS SHEET:

## TELEVISION/VIDEO RECORDING

Television includes live television, slow-scan television, and video recording/playback.

Live television may be used in the instructional setting to observe an event at a distance, to provide magnification or focus on a particular aspect of the learning activity, and to present the information to a large or geographically remote audience. The activities may be recorded for immediate or delayed playback. Recorded actions and materials can be displayed at various speeds, stopped or reversed, and preprogrammed material is readily edited and corrected.

Classroom television can be used to present preprogrammed material controlled from a central location or to present live events. Slow-scan television is a technique that permits a more efficient use of transmission capabilities by sending a lesser number of pictures per unit of time. Video recording and playback also permits the presentation of the instructional material under local control: the program is recorded, either at the central location or local site. Currently, video tape in reel or cassette form is used as the principal recording medium.

Video disc recording is a recent development which permits the recording and storage of extensive amounts of information in video format in a very limited space (i.e., on the video disc) for later access and playback. They can record local or transmit motion/still audiovisual signals at low cost. The technology also offers the possibility of random and instant access to any portion of the video disc recording.

FAMILY: G

MEMBER CHARACTERISTICS TABLE

MEMBER	Training Method		Training Level	Setting		Available Date	Acquisition & Courseware Costs					Presentation				
	I	C	1 - 8	I	U		High Med Low					V	A	T	S	
							5	4	3	2	1					
1. Classroom Closed Circuit Television (CCTV)	X	X	5,8	X	X	UNK	X						X	X		X
2. Television Trainer (TVT)	X	X	5,8	X	X	Now				X			X	X		X
3. Video Disc	X		5,8	X	X	79-80		X					X	X		X
				</												

FAMILY: G  
MEMBER: 1

G	<u>FAMILY:</u> TELEVISION/VIDEO RECORDING						
1	<u>MEMBER:</u> Classroom Closed-Circuit Television (CCTV)						
G.1.1	<u>SOURCE/PROPONENT:</u> Directorate, Course Development and Training, USAFAS						
G.1.2	<p><u>DESCRIPTION:</u></p> <p>CCTV is a method of program information distribution. The television signal/information is distributed only to those receivers which are directly connected by cable, wiring, or point-to-point microwave transmission and limited to line-of-sight between each point. CCTV versatility is a function of overall system size and equipment generation age. A large CCTV system is generally less responsive to individual training needs, while a small system may be designed for learning carrel use. CCTV has immediate application to presentation of complex equipment operation, particularly where close up detail is necessary. It can be used for critique of various kinds of performances from personal tactical actions and procedures to leadership, counseling and role playing situations.</p> <p>There is no inherent capability in CCTV for requiring or responding trainee responses. Occasionally, CCTV systems have the provision for two-way programming providing response, evaluative and feedback aspects to learning experiences. Because CCTV <u>is</u> mainly a distribution system, it is limited only by the information to be distributed and can take advantage of the state-of-the-art productions of other media.</p>						
G.1.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <table border="0"> <thead> <tr> <th></th><th><u>COMMENTS</u></th></tr> </thead> <tbody> <tr> <td><u>X</u> Individual</td><td><u>CCTV can be "live" or prerecorded. Information can be presented to individuals or used to present information to team members for analysis and decision-</u></td></tr> <tr> <td><u>X</u> Collective</td><td><u>making. Applicable to leadership training where actors (prerecorded) or class participants play roles which are subsequently analyzed. Close-up of equipment details can be provided to individuals or team members in a classroom setting.</u></td></tr> </tbody> </table>		<u>COMMENTS</u>	<u>X</u> Individual	<u>CCTV can be "live" or prerecorded. Information can be presented to individuals or used to present information to team members for analysis and decision-</u>	<u>X</u> Collective	<u>making. Applicable to leadership training where actors (prerecorded) or class participants play roles which are subsequently analyzed. Close-up of equipment details can be provided to individuals or team members in a classroom setting.</u>
	<u>COMMENTS</u>						
<u>X</u> Individual	<u>CCTV can be "live" or prerecorded. Information can be presented to individuals or used to present information to team members for analysis and decision-</u>						
<u>X</u> Collective	<u>making. Applicable to leadership training where actors (prerecorded) or class participants play roles which are subsequently analyzed. Close-up of equipment details can be provided to individuals or team members in a classroom setting.</u>						



FAMILY: GMEMBER: 1G.1.3 TRAINING AND EVALUATION (CONT'D)

## G.1.3.1 LEVEL OF TRAINING:

COMMENTS     Unit Organization & Job DutiesCan be used to present a variety  
of situations/events within a  
classroom environment.X Tool Applications to Unit  
Job DutiesUse for demonstration, walk  
through and presentation ofX Component Procedures

situational problems.

X Task/Situation PracticeResponses must be accomplished  
using a system apart from the  
CCTV.X Small-Team     Larger-Team     Multi-UnitX Command Staff Exercise

## G.1.3.2 LEVEL OF EVALUATION:

     Module TestRequires intervention of instruc-  
tor and/or adjunctive material.     Lesson Items

FAMILY: G

MEMBER: 1

G.1.3	<b>LEVEL OF EVALUATION (CONT'D)</b>
	<div style="text-align: right;"><u>COMMENTS</u></div> <div> <input checked="" type="checkbox"/> Individual Performance/SQT           <div style="float: right;">Requires intervention of instructor and/or adjunctive material.</div> </div> <div> <input type="checkbox"/> Written           <div style="float: right;">_____</div> </div> <div> <input type="checkbox"/> Hands-On           <div style="float: right;">_____</div> </div> <div> <input type="checkbox"/> Performance Certification           <div style="float: right;">_____</div> </div> <div> <input checked="" type="checkbox"/> Team Exercise/ARTEP:           <div style="float: right;">Provide situation for subsequent group problem-solving activity</div> </div> <div>           Positions or echelons interacting:           <div style="float: right;">_____</div> </div>
G.1.4	<b><u>CAPABILITIES:</u></b>
G.1.4.1	<b><u>PRESENTATION:</u></b>
	<b>a. Visual</b>
	<div> <input checked="" type="checkbox"/> Alphanumeric           <div style="float: right;">Whatever can be presented via the tele-</div> </div> <div> <input checked="" type="checkbox"/> Special Symbology           <div style="float: right;">vision medium either in a live setting</div> </div> <div> <input checked="" type="checkbox"/> 2-D Graphics           <div style="float: right;">or by prerecorded tape.</div> </div> <div> <input checked="" type="checkbox"/> 3-D Graphics           <div style="float: right;">_____</div> </div> <div> <input checked="" type="checkbox"/> Static Displays           <div style="float: right;">_____</div> </div> <div> <input checked="" type="checkbox"/> Motion           <div style="float: right;">_____</div> </div> <div> <input checked="" type="checkbox"/> Color           <div style="float: right;">Requires color equipment and receiver.</div> </div>
	<b>b. Auditory</b>
	<div> <input checked="" type="checkbox"/> Signals/Tones           <div style="float: right;">_____</div> </div> <div> <input checked="" type="checkbox"/> Speech           <div style="float: right;">_____</div> </div>
	<b>c. Tactile</b>
	<div> <input type="checkbox"/> Size/Shape           <div style="float: right;">_____</div> </div> <div> <input type="checkbox"/> Positional Cues           <div style="float: right;">_____</div> </div>

FAMILY: G  
MEMBER: 1

G.1.4.2	RESPONSE:	<u>COMMENTS</u>
a.	Verbal/Symbolic	
	<input type="checkbox"/> Choice Selection	Requires intervention of an instructor or adjunctive material.
	<input type="checkbox"/> Specific Recall	
	<input type="checkbox"/> Composed/Created	
	b. Performance	
	<input type="checkbox"/> Indication	
	<input type="checkbox"/> Manipulation	
	<input type="checkbox"/> Read/Interpret	
	<input type="checkbox"/> Listen/Interpret	
	<input type="checkbox"/> Voice Composition	
	<input type="checkbox"/> Situation Evaluation	
	<input type="checkbox"/> Decide Action	
G.1.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	<input checked="" type="checkbox"/> Informative	Material is presented for critique or problem-solving by individual or group.
	<input checked="" type="checkbox"/> Evaluative	
	<input checked="" type="checkbox"/> Corrective	
	<input type="checkbox"/> Summary	
	<input checked="" type="checkbox"/> Immediate	View situation presented, critique action/solution by instructor or peer group.
	<input type="checkbox"/> Delayed	
	b. Presentation Control	
	<input type="checkbox"/> Learner	
	<input type="checkbox"/> Media	
	<input checked="" type="checkbox"/> Instructor	Can be controlled by instructor.

FAMILY: C  
MEMBER: 1

**G.1.4.3 TRAINING MANAGEMENT (CONT'D)**

### COMMENTS

### c. Sequencing

<u>X</u> Linear	Presented as transmitted (live or taped)
<u>    </u> Response Branching	_____
<u>    </u> History Branching	_____
<u>X</u> Repetitive Practice	Prerecorded tapes can be repeated.

#### d. Recordkeeping

<u>Automatic (Temporary Storage)</u>	
<u>X Automatic (Permanent Storage)</u>	<u>Prerecorded tapes of presentation but not responses.</u>
<u>Manual</u>	
<u>None</u>	

G.1.5	SETTING:
-------	----------

G.1.5.1	X	INSTITUTIONAL
---------	---	---------------

<u>X</u>	Service School	Available at USAFAS classroom
___	Army Training Ctr (ATC)	
___	Div/Post Installation Schools	

G.1.5.2	UNIT
---------	------

<input type="checkbox"/> In-System (Embedded)	
<input type="checkbox"/> Job-Station	
<input type="checkbox"/> Individual Learning Ctr (ILC)	
<input type="checkbox"/> Barracks/Home	
<input type="checkbox"/> Garrison Training Area	
<input type="checkbox"/> Local Training Area	
<input type="checkbox"/> Major Training	
<input type="checkbox"/> National Range	



FAMILY: G  
MEMBER: 1

G.1.5.3	REQUIREMENTS:	COMMENTS
	TV cameras, receivers, cabling, classroom to house system, power source.	
G.1.6	EXPORTABILITY:	
	In Units Planning <input checked="" type="checkbox"/> No No plans known.	
G.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	At USAFAS CLASSROOMS.
	Future Date	
	Unknown	
G.1.6.2	METHOD:	
	Mail/Ship	
	<input checked="" type="checkbox"/> Install	
	Remote Access (Telecommunications)	
	In System	
	Job Materials	
G.1.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	
	Unit Issue	
G.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	CCTV at USAFAS Prerecorded Tapes:
	Probable	Units--TRADOC Hq, Ft. Monroe
	Unknown	Schools/ATSCs--USAFAS

FAMILY: G

MEMBER: 1

G.1.7	<u>SUPPORT REQUIREMENTS:</u>	
		<u>COMMENTS</u>
G.1.7.1	LOGISTICAL SUPPORT:	
	<input checked="" type="checkbox"/> Storage Areas	Store equipment of CCTV system
	<input checked="" type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input type="checkbox"/> Expendable Material	
G.1.7.2	MAINTENANCE REQUIREMENTS:	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	As required to support TV cameras,
	<input checked="" type="checkbox"/> Operator	receivers and other system equipment.
	<input checked="" type="checkbox"/> Organizational Maintenance	
	<input checked="" type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
G.1.7.3	MANNING REQUIREMENTS: Total = <u>2</u>	
	<input checked="" type="checkbox"/> System Operators	Operate CCTV equipment
	<input checked="" type="checkbox"/> Instructors/Facilitators	
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
G.1.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input checked="" type="checkbox"/> Special Personnel Skills	Operate CCTV equipment
	<input checked="" type="checkbox"/> Special Equipment	CCTV cameras, receivers
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY:         G        MEMBER:         1        

G.1.8	<u>COST DATA:</u>	<u>COMMENTS</u>
G.1.8.1	SYSTEM ACQUISITION:	
	<input checked="" type="checkbox"/> High	_____
	<input type="checkbox"/> Medium	_____
	<input type="checkbox"/> Low	_____
	<input type="checkbox"/> None	_____
G.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	_____
	<input type="checkbox"/> Medium	_____
	<input checked="" type="checkbox"/> Low	_____
	<input type="checkbox"/> None	_____
G.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	_____
	<input type="checkbox"/> Medium	_____
	<input checked="" type="checkbox"/> Low	_____
	<input type="checkbox"/> None	_____
G.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	_____
	<input checked="" type="checkbox"/> Medium	Prerecorded instructional tapes.
	<input checked="" type="checkbox"/> Low	Live transmissions.
	<input type="checkbox"/> None	_____
G.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	_____
	<input type="checkbox"/> Physical Skills	_____
	<input type="checkbox"/> Mental Skills	_____
	<input type="checkbox"/> MOS Requirements	_____
	<input type="checkbox"/> Aptitudes	_____
	<input type="checkbox"/> Schools/Courses	_____
	<input type="checkbox"/> Training	_____
	<input type="checkbox"/> Other	_____
	<input type="checkbox"/> None	_____

FAMILY: G

MEMBER: 1

G.1.10 ADDITIONAL COMMENTS SHEET:



FAMILY: G  
MEMBER: 2

G	<u>FAMILY:</u> TELEVISION/VIDEO RECORDING
2	<u>MEMBER:</u> Television Trainer (TVT)
G.2.1	<u>SOURCE/PROPONENT:</u> Training Material Support Detachment, Tobyhanna, PA.
G.2.2	<p><u>DESCRIPTION:</u> The TVT is a lightweight television system composed of a camera, video recorder and playback unit, a TV monitor, and auxillary equipment. Trainers can record individual and collective training and can "instant replay" the recorded actions. Soldiers undergoing training can see themselves on the playback unit and errors can be spotted and replayed as many times as necessary to insure understanding. The "instant replay" feature of the TVT, together with its ease of operation, makes it ideally suited for use in three areas: to critique, demonstrate, or standardize training. Critique steps include tape, view, critique, and repeat the training. Usable at virtually any location, it requires a system operator and one instructor. It is currently available for use.</p>
G.2.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <p style="text-align: right;"><u>COMMENTS</u></p> <p><u>X</u> Individual <u>Nearly any training activity may be recorded and replayed; taped activities otherwise inaccessible may be shown to groups; and different groups may be</u></p> <p><u>X</u> Collective <u>shown the same lesson. Permits team-task critiques.</u></p> <p>_____</p> <p>_____</p>

FAMILY: G  
MEMBER: 2

G.2.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
G.2.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	<u>Can be used at any training level</u> <u>to record events and then play-</u> <u>back to individuals or groups.</u>
	<u>X</u> Tool Applications to Unit Job Duties	<u></u> <u></u>
	<u>X</u> Component Procedures	<u></u> <u></u>
	<u>X</u> Task/Situation Practice	<u></u> <u></u>
	<u>X</u> Small-Team	<u></u> <u></u>
	<u>X</u> Larger-Team	<u></u> <u></u>
	<u>X</u> Multi-Unit	<u></u> <u></u>
	<u>X</u> Command Staff Exercise	<u></u> <u></u>
G.2.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<u>Critique recorded events.</u> <u>Requires use of adjunctive</u> <u>material and equipment.</u>
	<u>Lesson Items</u>	<u></u> <u></u> <u></u>

MEMBER: 2

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FAMILY: G

MEMBER: 2

G.2.4.2	<b>RESPONSE:</b>	<u>COMMENTS</u>
	<p>a. Verbal/Symbolic</p> <p><u>X</u> Choice Selection      <u>Response depends on instructor or</u>  <u>      </u> Specific Recall      <u>adjunctive material.</u>  <u>      </u> Composed/Created      _____</p> <p>b. Performance</p> <p><u>      </u> Indication      _____  <u>      </u> Manipulation      _____  <u>      </u> Read/Interpret      _____  <u>      </u> Listen/Interpret      _____  <u>      </u> Voice Composition      _____  <u>      </u> Situation Evaluation      _____  <u>      </u> Decide Action      _____</p>	
G.2.4.3	<b>TRAINING MANAGEMENT:</b>	
<p>a. Feedback</p> <p><u>X</u> Informative      <u>Recorded material is presented for</u>  <u>X</u> Evaluative      <u>critique by individual or group.</u>  <u>X</u> Corrective      _____  <u>      </u> Summary      _____  <u>X</u> Immediate      <u>Views own actions, then critiqued by</u>  <u>      </u> Delayed      <u>instructor.</u></p> <p>b. Presentation Control</p> <p><u>      </u> Learner      _____  <u>      </u> Media      _____  <u>X</u> Instructor      <u>Conducts filming and reviewing cycle,</u>                           <u>or demonstration/lecture.</u></p>		



FAMILY:         G          
MEMBER:         2        

G.2.4.3	TRAINING MANAGEMENT (CONT'D)		<u>COMMENTS</u>
	c. Sequencing		
	<u>  X  </u> Linear	<u>Events presented as recorded.</u>	
	<u>      </u> Response Branching		
	<u>      </u> History Branching		
	<u>  X  </u> Repetitive Practice	<u>For critique use.</u>	
	d. Recordkeeping		
	<u>      </u> Automatic (Temporary Storage)		
	<u>  X  </u> Automatic (Permanent Storage)	<u>Pre-recorded tapes of pre-</u>	
	<u>      </u> Manual	<u>sentation but not response.</u>	
	<u>      </u> None		
G.2.5	<u>SETTING:</u>		
G.2.5.1	<u>  X  </u> INSTITUTIONAL		
	<u>      </u> Service School	<u>Can be used within any instructional</u>	
	<u>      </u> Army Training Ctr (ATC)	<u>setting.</u>	
	<u>      </u> Div/Post Installation Schools		
G.2.5.2	<u>  X  </u> UNIT		
	<u>      </u> In-System (Embedded)	<u>Can be used whenever TVT can be used</u>	
	<u>      </u> Job-Station	<u>to record events and then play them</u>	
	<u>      </u> Individual Learning Ctr (ILC)	<u>back on the monitor.</u>	
	<u>      </u> Barracks/Home		
	<u>      </u> Garrison Training Area		
	<u>      </u> Local Training Area		
	<u>      </u> Major Training		
	<u>      </u> National Range		

MEMBER: 2

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FAMILY: G  
 MEMBER: 2

G.2.7	<u>SUPPORT REQUIREMENTS:</u>	
G.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	Store TVT equipment when not in use.
	<input type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input type="checkbox"/> Expendable Material	
G.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<input checked="" type="checkbox"/> Operator	As listed in instruction manual.
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
G.2.7.3	<u>MANNING REQUIREMENTS: Total = <u>2</u></u>	
	<input checked="" type="checkbox"/> System Operators	For camera operation.
	<input checked="" type="checkbox"/> Instructors/Facilitators	One or more (mission dependent).
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
G.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input type="checkbox"/> Special Personnel Skills	
	<input type="checkbox"/> Special Equipment	
	<input type="checkbox"/> Facility	
	<input checked="" type="checkbox"/> Reproduction	Dub video tapes for distribution
	<input type="checkbox"/> Update	

FAMILY: GMEMBER: 2

G.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
G.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
G.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
G.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
G.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input checked="" type="checkbox"/> Medium	<u>Prerecorded instructional tapes</u>
	<input checked="" type="checkbox"/> Low	<u>Unit generated video tapes.</u>
	<input type="checkbox"/> None	
G.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Mission dependent.</u>
	<input type="checkbox"/> None	



FAMILY: G

MEMBER: 2

G.2.10 ADDITIONAL COMMENTS SHEET:

FAMILY: G  
MEMBER: 3

G	<u>FAMILY:</u> TELEVISION/VIDEO RECORDING												
3	<u>MEMBER:</u> Video Disc												
G.3.1	<u>SOURCE/PROPONENT:</u> ATSC/TRADER/PM TRADE/NTEC												
G.3.2	<p><u>DESCRIPTION:</u> Video disc systems provide a technology to record local or transmitted motion/still audiovisual signals at low cost, packing very high information density into a small storage space. The technology also offers the possibility of random and instant access to any portion of the video disc recording. System components include: (1) a means for input of the visual/audiovisual signal (sound film, videotape, etc.) to the video disc mastering equipment; (2) the disc mastering gear; (3) replication gear to copy discs; and (4) disc player and screen for user locations. The player capability may be strictly linear, or may offer random-access to information by means of optical scan or mechanical stylus.</p> <p>There are two basic categories of random-access players. The "optical" player locates and reads information by a light beam, offering unlimited ability for still-frame display and freeze without disc damage. The "mechanical" player reads information by a stylus making physical contact with disc, offering limited still-frame display due to disc wear. The table following G.3.10 compares four developmental systems on summary characteristics and costs.</p> <p>Primary applications include: (1) document storage and random-access retrieval (one optical videodisc stores approximately 1000 fiche); (2) training playback of motion sequences and stills from the same disc. Motion is real at 35 frames/second, rather than animation, so is cost-efficient for developing training requiring combined motion and stills.</p>												
G.3.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <table border="0"> <thead> <tr> <th></th> <th><u>COMMENTS</u></th> </tr> </thead> <tbody> <tr> <td><u>X</u> Individual</td> <td><u>Audio-visual lesson playback (motion and stills).</u></td> </tr> <tr> <td></td> <td><u>Selective information retrieval (e.g., logistics data, troubleshooting procedure).</u></td> </tr> <tr> <td><u>Collective</u></td> <td><u>_____</u></td> </tr> <tr> <td></td> <td><u>_____</u></td> </tr> <tr> <td></td> <td><u>_____</u></td> </tr> </tbody> </table>		<u>COMMENTS</u>	<u>X</u> Individual	<u>Audio-visual lesson playback (motion and stills).</u>		<u>Selective information retrieval (e.g., logistics data, troubleshooting procedure).</u>	<u>Collective</u>	<u>_____</u>		<u>_____</u>		<u>_____</u>
	<u>COMMENTS</u>												
<u>X</u> Individual	<u>Audio-visual lesson playback (motion and stills).</u>												
	<u>Selective information retrieval (e.g., logistics data, troubleshooting procedure).</u>												
<u>Collective</u>	<u>_____</u>												
	<u>_____</u>												
	<u>_____</u>												

FAMILY: GMEMBER: 3

G.3.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
G.3.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	<u>Instructional presentations.</u>
	<u>X</u> Tool Applications to Unit Job Duties	<u>Demonstration, data retrieval.</u>
	<u>X</u> Component Procedures	<u>Demonstration, procedures retrieval.</u>
	<u>X</u> Task/Situation Practice	<u>Situational simulations (for applying component procedures).</u>
	<u>X</u> Small-Team	<u>Situational simulations (for tactical decision making).</u>
	<u>    </u> Larger-Team	
	<u>    </u> Multi-Unit	
	<u>    </u> Command Staff Exercise	
G.3.3.2	LEVEL OF EVALUATION:	
	<u>    </u> Module Test	<u>Can present task situations.</u>
		<u>No inherent response capability,</u>
		<u>unless information retrieval</u>
	<u>    </u> Lesson Items	<u>from disc is the task response.</u>

FAMILY: G

MEMBER: 3

G.3.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	Situational presentations. No
	<u>    </u> Written	inherent response capability,
	<u>    </u> Hands-On	unless information retrieval from
	<u>    </u> Performance Certification	disc is the hands-on response.
	<u>X</u> Team Exercise/ARTEP:	
	Positions or echelons	
	interacting:	
G.3.4	<u>CAPABILITIES:</u>	
G.3.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>    </u> <u>X</u> Alphanumeric	
	<u>    </u> <u>X</u> Special Symbolology	
	<u>    </u> <u>X</u> 2-D Graphics	
	<u>    </u> <u>X</u> 3-D Graphics	
	<u>    </u> <u>X</u> Static Displays	
	<u>    </u> <u>X</u> Motion	
	<u>    </u> <u>X</u> Color	
	b. Auditory	
	<u>    </u> <u>X</u> Signals/Tones	
	<u>    </u> <u>X</u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	



FAMILY:         G        

MEMBER:         3        

G.3.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>  X  </u> Choice Selection	<u>Only with adjunctive materials,</u>
	<u>  X  </u> Specific Recall	<u>response devices, or actual objects.</u>
	<u>      </u> Composed/Created	
	b. Performance	
	<u>      </u> Indication	
	<u>      </u> Manipulation	
	<u>  X  </u> Read/Interpret	
	<u>  X  </u> Listen/Interpret	
	<u>      </u> Voice Composition	
	<u>  X  </u> Situation Evaluation	
	<u>  X  </u> Decide Action	
G.3.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	<u>      </u> Informative	<u>No inherent capability for feedback.</u>
	<u>      </u> Evaluative	<u>Could be implemented equivalent to</u>
	<u>      </u> Corrective	<u>Beseler Cue-See.</u>
	<u>      </u> Summary	
	<u>      </u> Immediate	
	<u>      </u> Delayed	
	b. Presentation Control	
	<u>  X  </u> Learner	<u>Information retrieval.</u>
	<u>  X  </u> Media	<u>As pre-programmed on disc.</u>
	<u>  X  </u> Instructor	<u>Group mode presentations from disc.</u>

FAMILY: G  
MEMBER: 3

G.3.5.3	<u>X</u> REQUIREMENTS:	<u>COMMENTS</u>
		<u>At least space for disc player, display screen, power source,</u> <u>and disc storage. Added for mastering and replication</u> <u>equipment.</u>
G.3.6	EXPORTABILITY:	
	<u>    </u> In Units <u>X</u> Planning <u>X</u> No <u>    </u>	<u>No known Army plans for export.</u>
G.3.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>    </u> Currently Available	<u>    </u>
	<u>X</u> Future Date	<u>1979-1980 commercially available.</u>
	<u>    </u> Unknown	<u>    </u>
G.3.6.2	METHOD:	
	<u>X</u> Mail/Ship	<u>Discs, player, screen.</u>
	<u>    </u> Install	<u>    </u>
	<u>X</u> Remote Access (Telecommunications)	<u>Transmitted &amp; recorded at user</u>
	<u>X</u> In System	<u>site, or access to central disc file.</u>
	<u>X</u> Job Materials	<u>Player/retrieval unit and pre-recorded</u> <u>video discs.</u>
G.3.6.3	BASIS OF ISSUE:	
	<u>    </u> On Demand	<u>No plans known.</u>
	<u>    </u> Unit Issue	<u>    </u>
G.3.6.4	SOURCE:	
	<u>    </u> Known	<u>    </u>
	<u>X</u> Probable	<u>ATSC/TRADER/NTEC</u>
	<u>    </u> Unknown	<u>    </u>

FAMILY: G  
MEMBER: 3

G.3.7	<u>SUPPORT REQUIREMENTS:</u>	
G.3.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Video discs, players, screens</u>
	<input checked="" type="checkbox"/> Spare Parts	<u>Bulbs, etc.</u>
	<input checked="" type="checkbox"/> Additional Copies On Hand	<u>Backup discs (mechanical wear)</u>
	<input type="checkbox"/> Expendable Material	<u></u>
G.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u></u>
	<input checked="" type="checkbox"/> Operator	<u></u>
	<input type="checkbox"/> Organizational Maintenance	<u>Unknown. See Table at G.3.10.</u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
G.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>1</u> minimum, the user/trainee.</u>	
	<input type="checkbox"/> System Operators	<u>Depends on application.</u>
	<input type="checkbox"/> Instructors/Facilitators	<u></u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u></u>
	<input type="checkbox"/> Support Personnel	<u></u>
G.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>Mastering &amp; duplication technicians.</u>
	<input checked="" type="checkbox"/> Special Equipment	<u>Mastering &amp; replication equipment.</u>
	<input checked="" type="checkbox"/> Facility	<u></u>
	<input checked="" type="checkbox"/> Reproduction	<u>Easier with photographic discs.</u>
	<input type="checkbox"/> Update	<u></u>

FAMILY: G  
MEMBER: 3

G.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
G.3.8.1	SYSTEM ACQUISITION: See comparison table at G.3.10.	
	<input checked="" type="checkbox"/> High	<u>Mastering &amp; replication equipment.</u>
	<input type="checkbox"/> Medium	<u></u>
	<input checked="" type="checkbox"/> Low	<u>Player &amp; display screen.</u>
	<input type="checkbox"/> None	<u></u>
G.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	<u></u>
	<input type="checkbox"/> Medium	<u></u>
	<input checked="" type="checkbox"/> Low	<u>Ongoing use of player &amp; display.</u>
	<input type="checkbox"/> None	<u></u>
G.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	<u>Unknown. However, differences between</u>
	<input type="checkbox"/> Medium	<u>systems. See table at G.3.10.</u>
	<input checked="" type="checkbox"/> Low	<u></u>
	<input type="checkbox"/> None	<u></u>
G.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	<u>Less than Beseler Cue-See filmstrip</u>
	<input checked="" type="checkbox"/> Medium	<u>for equivalent or better motion</u>
	<input type="checkbox"/> Low	<u>(no animation required).</u>
	<input type="checkbox"/> None	<u></u>
G.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	<u>Depends upon subject matter. Audio-</u>
	<input type="checkbox"/> Physical Skills	<u>visual mode places low demands on</u>
	<input type="checkbox"/> Mental Skills	<u>reading. Combined verbal-pictorial</u>
	<input type="checkbox"/> MOS Requirements	<u>comprehension requirement will depend</u>
	<input type="checkbox"/> Aptitudes	<u>on how media is utilized by material</u>
	<input type="checkbox"/> Schools/Courses	<u>developers.</u>
	<input type="checkbox"/> Training	<u></u>
	<input type="checkbox"/> Other	<u></u>
	<input type="checkbox"/> None	<u></u>



FAMILY: C  
MEMBER: 3

G.3.10 ADDITIONAL COMMENTS SHEET:

The following major systems are in development:

- a. North American Philips Corp./MCA
- b. Thompson-CSF
- c. RCA Corp.
- d. Videonics of Hawaii/ARCO

For summary characteristics and costs see Table G.3.10, next page.

Table G.3.10. Comparison of Video Disc Systems

	<u>PHILIPS/MCA</u>	<u>THOMPSON-CSF</u>	<u>RCA</u>	<u>VIDEONICS/ARCO</u>
<u>Estimated Costs</u>				
Player	\$1,200	\$900	\$900	\$500
Disc copy	\$12	\$1.25	\$12	\$1.40
<u>Quality</u>				
Sound	Excellent	Excellent	Good	Less Good
Video	Excellent	Excellent	Poor	Excellent
Color	Excellent	Excellent	Poor	Excellent
<u>Estimated Maint.</u>				
Maintenance of Player	Very complex	Complex	Wear (Stylus)	Very few problems
Maintenance of Disc	Disc surface protected	Poor. Thus, cassette to protect disc (costs)	Not protected	Disc surface protected
<u>Production</u>				
Mastering at the End User Level	No	No	No	Yes
Replicating at the End User Level	No	Yes	No	Yes
30 Min. Program Copying Time	20 sec.	5 sec.	?	3 sec.
Estimated No. of Replications Per Day	1,440	5,760	?	9,600

## COMPUTER ASSISTED/MANAGED INSTRUCTION (CAI/CMI)

The computer may be used to present individual instruction and practice and to manage the presentation of instruction. As an instructional medium the computer can be programmed to present instructional materials, interact with the student, record and analyze responses, and adapt the instructional sequence based on the cumulative trend of a student's responses.

In computer managed instruction (CMI), student learning performance data (usually test results) are entered into the computer via any of a number of possible data entry devices. The computer aggregates and scores the trainee performance in keeping with the learning objectives and standards, evaluates the results, and prescribes the next set of learning activities. The computer maintains a cumulative record of student performance and learning prescriptions and provides a printout of this information periodically or on request. Instead of the testing taking place off-line for subsequent processing and entry into the computer, the program may also be designed for interactive computer presentation of the test materials and immediate assignment of the next learning activity.

In computer assisted instruction (CAI), the instructional materials are presented by the computer, usually via a cathode ray tube (CRT) or teletypewriter. The student interacts with the computer via a keyboard or other console device. Responses are scored and evaluated, and decision rules incorporated in the instructional program are used to determine instructional sequencing and performance feedback.

A principal advantage of CAI is that it can approximate human instructor capabilities (including interaction, response monitoring, and adaptive strategies) while maintaining standardization and quality of instruction. Disadvantages may include high initial development costs; software and hardware complexity and associated maintenance requirements; and the need for additional skills (computer programming) beyond subject matter expertise for program

COMPUTER ASSISTED/MANAGED INSTRUCTION (CAI/CMI) (Cont'd)

development. The initial acquisition costs may be relatively low if machine-transferable software is used (such as the PLANIT CAI system) rather than a system wedded to a specific computer or interactive terminal device.

Two advantages of computer-based delivery systems include: (1) automated recording, update, and listing of student records; (2) efficiency of courseware (tests, lessons, simulations) data base update. The second advantage is particularly true with an interactive compiler CAI system and a text editor, such as the configuration accessible by USAFAS on the UNIVAC 1108.



FAMILY: H

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FAMILY: H  
 MEMBER: 1

H	<u>FAMILY:</u> COMPUTER-ASSISTED/MANAGED INSTRUCTION (CAI/CMI)									
1	<u>MEMBER:</u> Remote-Access PLANIT									
H.1.1	<u>SOURCE/PROPONENT:</u> Access to PLANIT System-Army Research Institute. Courseware development - Director, Directorate of Course Development and Training, USAFAS.									
H.1.2	<u>DESCRIPTION:</u> Remote-access PLANIT is an individual training system that presents instructional material via telecommunications to a trainee at a CRT or teletype terminal at a remote station. The CAI system PLANIT (Programming LANGUAGE for Interactive Teaching) Version 3.1 operates on the UNIVAC 1108 computer at the Edgewood Arsenal facility. PLANIT is designed for maximum ease of transferability among computers of different vendors and operates at other Army locations. Each student station uses a remote terminal station with the number of stations being dependent upon the number of users assessing the UNIVAC 1108. Up to 30 student stations are possible in the time-sharing environment but operation times (response to presentation) tends to increase as user load increases. The trainee establishes communication with the UNIVAC 1108 computer by direct telephone link-up, logs onto the system, loads PLANIT, and requests the lesson of his choice. The instructional material is presented at the remote student station where the trainee proceeds through the material at his own pace. The trainee keys in his response using the terminal keyboard. PLANIT evaluates the response using a number of features that are provided within the system and determines the next instructional segment to be presented. Performance records are automatically maintained by PLANIT which can be processed by the instructor or facilitator. This is in addition to an interactive record which is printed on a line printer. The trainee can end an (Continued on next page)									
H.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;"><u>X</u> Individual</td> <td>Self-paced individualized instruction in any subject in which textual displays and keyboard responses, augmented by exhibits, is appropriate to the</td> </tr> <tr> <td>Collective</td> <td>training requirement.</td> </tr> <tr> <td> </td> <td> </td> </tr> <tr> <td> </td> <td> </td> </tr> </table>		<u>X</u> Individual	Self-paced individualized instruction in any subject in which textual displays and keyboard responses, augmented by exhibits, is appropriate to the	Collective	training requirement.				
<u>X</u> Individual	Self-paced individualized instruction in any subject in which textual displays and keyboard responses, augmented by exhibits, is appropriate to the									
Collective	training requirement.									

FAMILY: H  
MEMBER: 1

H.1.2 DESCRIPTION: (Cont'd)

on-line session and then resume instruction at a later date and be automatically returned to the appropriate position in the instructional material. Lessons can be linked to form an instructional segment (module) with movement among lessons being invisible to the trainee. Lessons can be developed, executed, and edited on-line by the author and then entered into a permanent lesson file by the system operator using the Text Editor system. Existing courseware can be immediately updated to reflect necessary changes through the use of PLANIT editing capabilities. On-line instructional material may be augmented by off-line exhibits. Plans for export are unknown, but the system is accessible with a remote terminal.

FAMILY: HMEMBER: 1H.1.3 TRAINING AND EVALUATION (CONT'D)

## H.1.3.1 LEVEL OF TRAINING:

COMMENTS☒ Unit Organization & Job Duties

Courseware can be developed to  
present individual instruction  
up through component training  
and procedures.

☒ Tool Applications to Unit  
Job Duties☒ Component Procedures☒ Task/Situation Practice

Some tasks (e.g., computer pro-  
gramming). More tasks with

☐ Small-Team

adjunctive materials.

☐ Larger-Team☐ Multi-Unit☐ Command Staff Exercise

## H.1.3.2 LEVEL OF EVALUATION:

☒ Module Test

As developed by course designer.

☒ Lesson Items

Each instructional unit can have  
embedded test items to access  
enroute as well as terminal per-  
formance.



FAMILY: H

MEMBER: 1

H.1.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Individual Performance/SQT	Where remote terminal displays (augmented by off-line exhibits)
	<input checked="" type="checkbox"/> Written (Textual keyboard)	and keyboard responses are appropriate to assess task performance.
	<input type="checkbox"/> Hands-On	
	<input type="checkbox"/> Performance Certification	
	<input type="checkbox"/> Team Exercise/ARTEP:	
	Positions or echelons interacting:	
H.1.4	<u>CAPABILITIES:</u>	
H.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<input checked="" type="checkbox"/> Alphanumeric	Limited to displayable character set of
	<input checked="" type="checkbox"/> Special Symbology	terminal, except for adjunctive materials.
	<input type="checkbox"/> 2-D Graphics	
	<input type="checkbox"/> 3-D Graphics	
	<input checked="" type="checkbox"/> Static Displays	
	<input type="checkbox"/> Motion	
	<input type="checkbox"/> Color	
	b. Auditory	
	<input type="checkbox"/> Signals/Tones	
	<input type="checkbox"/> Speech	
	c. Tactile	
	<input type="checkbox"/> Size/Shape	
	<input type="checkbox"/> Positional Cues	



FAMILY: HMEMBER: 1

## H.1.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

## c. Sequencing

<u>X</u> Linear	Sequence based on lesson design and
<u>X</u> Response Branching	how trainee responds. Decisions are
<u>X</u> History Branching	based on historical, individual, per-
<u>X</u> Repetitive Practice	formance records. Based on predetermined
	decision standards.

## d. Recordkeeping

<u>X</u> Automatic (Temporary Storage)	Performance records can be out-
<u>X</u> Automatic (Permanent Storage)	put at printer. Using 1108
<u>    </u> Manual	file management software.
<u>    </u> None	

H.1.5 SETTING:H.1.5.1 X INSTITUTIONAL

<u>X</u> Service School	Available at USAFAS on remote
<u>    </u> Army Training Ctr (ATC)	terminal stations. See H.1.5.3,
<u>    </u> Div/Post Installation	Requirements.
<u>    </u> Schools	

H.1.5.2      UNIT

<u>    </u> In-System (Embedded)	Available at unit level wherever
<u>    </u> Job-Station	remote terminal and telephone lines
<u>X</u> Individual Learning Ctr (ILC)	can be established.
<u>X</u> Barracks/Home	
<u>X</u> Garrison Training Area	
<u>    </u> Local Training Area	
<u>    </u> Major Training	
<u>    </u> National Range	

FAMILY: H

MEMBER: 1

H.1.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Remote terminal (CRT or teletype), telephone line to Edgewood Arsenal, modem, line printer compatible with remote terminal.</u>
		<u>Area for student station.</u>
H.1.6	<u>EXPORTABILITY:</u>	
	<u>    In Units</u> <input checked="" type="checkbox"/> <u>Planning</u> <u>    No</u> <u>Precise plans unknown.</u>	
H.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u>At USAFAS. Other locations could access.</u>
	<u>    Future Date</u>	<u>Could establish computer facility to</u>
	<u>    Unknown</u>	<u>USAFAS with direct access to student</u>
H.1.6.2	METHOD:	<u>stations.</u>
	<u>    Mail/Ship</u>	
	<u>    Install</u>	
	<input checked="" type="checkbox"/> Remote Access (Telecommunications)	<u>Edgewood Arsenal UNIVAC 1108</u>
	<u>    In System</u>	
	<u>    Job Materials</u>	
H.1.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u>Dependent on number of student stations</u>
	<u>    Unit Issue</u>	<u>and telephone lines established.</u>
H.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>ARI coordination with Edgewood Arsenal.</u>
	<u>    Probable</u>	
	<u>    Unknown</u>	



FAMILY: HMEMBER: 1

H.1.7	<u>SUPPORT REQUIREMENTS:</u>	
H.1.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Remote terminal, equipment, listings.</u>
	<input checked="" type="checkbox"/> Spare Parts	<u>Paper for terminal printer.</u>
	<input type="checkbox"/> Additional Copies On Hand	
	<input checked="" type="checkbox"/> Expendable Material	<u>Off-line exhibits used with on-line instruction.</u>
H.1.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input checked="" type="checkbox"/> Organizational Maintenance	<u>For remote terminal and line printer.</u>
	<input checked="" type="checkbox"/> Direct Support Maintenance	<u>PLANIT software by ARI.</u>
	<input checked="" type="checkbox"/> General Support Maintenance	<u>PLANIT/UNIVAC interface by Edgewood</u>
	<input type="checkbox"/> Depot Maintenance	
H.1.7.3	<u>MANNING REQUIREMENTS: Total = <u>2</u> or More</u>	
	<input checked="" type="checkbox"/> System Operators	<u>At Edgewood Arsenal.</u>
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>Monitor student terminal area, process</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u>performance records.</u>
	<input type="checkbox"/> Support Personnel	
H.1.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>Use of PLANIT and system operations.</u>
	<input checked="" type="checkbox"/> Special Equipment	<u>Terminals, printers, modems, phones.</u>
	<input checked="" type="checkbox"/> Facility	<u>Area to house user configuration.</u>
	<input type="checkbox"/> Reproduction	
	<input checked="" type="checkbox"/> Update	<u>Relate ease of update.</u>

FAMILY: H  
MEMBER: 1

H.1.8	<u>COST DATA:</u>	<u>COMMENTS</u>
H.1.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Cost of remote terminal and line printer.</u>
	<input type="checkbox"/> None	
H.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Varies: \$900 per month per phone line. USAFAS</u>
	<input type="checkbox"/> None	<u>to Edgewood Arsenal. Computer costs</u>
		<u>\$7.50 per hour.</u>
H.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Maintain user equipment and software.</u>
	<input type="checkbox"/> None	
H.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input checked="" type="checkbox"/> Medium	<u>70 to 150 developmental hours to 1 hour</u>
	<input type="checkbox"/> Low	<u>of instruction.</u>
	<input type="checkbox"/> None	
H.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input checked="" type="checkbox"/> Physical Skills	<u>Able to operate remote terminal keyboard.</u>
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input checked="" type="checkbox"/> Aptitudes	<u>Textual displays requires reading.</u>
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Prerequisites dependent on course material</u>
	<input type="checkbox"/> None	<u>presented.</u>

FAMILY: H  
MEMBER: 1

H.1.10 ADDITIONAL COMMENTS SHEET:

FAMILY: H  
MEMBER: 2

H	<u>FAMILY:</u> COMPUTER-AMSTED/MANAGED INSTRUCTION (CAI/CMI)									
* 2	<u>MEMBER:</u> PLATO IV/TUTOR									
H.2.1	<u>SOURCE/PROPONENT:</u> Communicative Technology Directorate, ATSC Source: CERL, U. of Illinois; Control Data Corporation.									
H.2.2	<u>DESCRIPTION:</u> PLATO IV (Programmed Logic for Automated Teaching Operations) is a computer-assisted instructional system that is designed to provide individual instruction to trainees at specially designed terminals. The PLATO system currently resides on the CDC CYBER or 6000 series computer and includes the following components: PLATO terminals, operating system software, PLATO software subsystem and special communications equipment. A single PLATO computer system can handle several thousand trainee stations without degradation in response times. The PLATO author language (TUTOR), which is part of the software subsystem, permits authors to prepare, maintain and edit courseware. The courseware can be prepared directly from the PLATO terminal. The PLATO terminal is an interactive computer graphics terminal. The basic PLATO terminal consists of an electronic keyboard, plasma graphics display panel and associated electronics. Optional features include rear projection of microfiche images, and a touch input capability. Terminals can be connected directly to the computer or located remotely with connections being made via telecommunications. Users receive instructional material at the terminals and communicate with the computer by means of the keyboard or touch panel. The computer communicates with the user by generated alphanumeric characters or graphics on the plasma panel and/or by showing color images from a microfiche. The keyboard has the same characters as a typewriter, plus special learner-oriented keys, e.g., HELP. The trainee can type letters, numbers, words, or sentences or press one of the special keys to communicate with the									
H.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> (Continued on next page) <div style="text-align: center;"><u>COMMENTS</u></div> <table border="0"> <tr> <td style="width: 15%;"><u>X</u> Individual</td> <td>Self paced, individualized instruction can be developed for a variety of subjects in which textual or graphic displays, augmented by off-line exhibits, are appropriate to the training requirement.</td> </tr> <tr> <td><u>      </u> Collective</td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>		<u>X</u> Individual	Self paced, individualized instruction can be developed for a variety of subjects in which textual or graphic displays, augmented by off-line exhibits, are appropriate to the training requirement.	<u>      </u> Collective					
<u>X</u> Individual	Self paced, individualized instruction can be developed for a variety of subjects in which textual or graphic displays, augmented by off-line exhibits, are appropriate to the training requirement.									
<u>      </u> Collective										

\*PLATO is a registered trademark of Control Data Corporation. The PLATO System is being used by the Department of Army as a research vehicle.



FAMILY:   H  

MEMBER:   2  

H.2.2 DESCRIPTION: (Cont'd)

interactive lesson. PLATO evaluates the response using a number of features that are provided within the system and determines the next instructional segment to be presented. Performance records are automatically maintained by the system on all or parts of lesson execution and can be output for analysis by the instructor. PLATO also permits on-line monitoring of trainee progress by an instructor. On-line instructional material may be augmented by off-line exhibits.

FAMILY: H

MEMBER: 2

H.2.3 TRAINING AND EVALUATION (CONT'D)

H.2.3.1 LEVEL OF TRAINING:

COMMENTS

- |   |   |
|---|---|
| <input checked="" type="checkbox"/> Unit Organization & Job Duties          | Courseware can be developed by<br><u>instructors to incorporate train-</u><br><u>ing up through compoment</u> |
| <input checked="" type="checkbox"/> Tool Applications to Unit<br>Job Duties | <u>procedures and techniques. Use of</u><br><u>graphics, apparent motion and</u>                              |
| <input checked="" type="checkbox"/> Component Procedures                    | <u>microfiche displays coupled with</u><br><u>touch entry control can provide</u>                             |
| <input checked="" type="checkbox"/> Task/Situation Practice                 | <u>simulated displays in several</u><br><u>subject areas. (e.g., map reading</u>                              |
| <input checked="" type="checkbox"/> Small-Team                              | <u>and target location).</u><br><u>_____</u>  |
| <input type="checkbox"/> Larger-Team  | <u>_____</u><br><u>_____</u>  |
| <input type="checkbox"/> Multi-Unit   | <u>_____</u><br><u>_____</u>  |
| <input type="checkbox"/> Command Staff Exercise                             | <u>_____</u><br><u>_____</u>  |

H.2.3.2 LEVEL OF EVALUATION:

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> Module Test  | <u>Can develop module pre and post</u><br><u>tests.</u><br><u>_____</u>  |
| <input checked="" type="checkbox"/> Lesson Items | <u>Test items can be included within</u><br><u>lesson material as well as to</u><br><u>assess performance at lesson end.</u> |

FAMILY: H

MEMBER: 2

H.2.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	<u>Any task that can be presented at a</u>
		<u>terminal device and response can be</u>
	<u>X</u> Written (tectical keyboard) touch control	<u>entered using console keyboard or</u>
		<u>touch control.</u>
	<u>Hands-On</u>	<u></u>
		<u></u>
	<u>Performance Certification</u>	<u></u>
		<u></u>
	<u>Team Exercise/ARTEP:</u>	<u></u>
	<u>Positions or echelons</u> <u>interacting:</u>	<u></u>
H.2.4	<u>CAPABILITIES:</u>	
H.2.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	<u>PLATO terminal displayable character set</u>
	<u>X</u> Special Symbolology	<u>and special symbols as programmed using</u>
	<u>X</u> 2-D Graphics	<u>TUTOR language. Includes apparent depth.</u>
	<u>3-D Graphics</u>	<u></u>
	<u>X</u> Static Displays	<u>Textual material alphanumeric displays.</u>
	<u>X</u> Motion	<u>Apparent motion.</u>
	<u>X</u> Color	<u>Rear projection of microfiche (up to 250</u> <u>separate slides)</u>
	b. Auditory	
	<u>Signals/Tones</u>	<u></u>
	<u>Speech</u>	<u></u>
	c. Tactile	
	<u>Size/Shape</u>	<u></u>
	<u>Positional Cues</u>	<u></u>

FAMILY: H  
MEMBER: 2

H.2.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>X</u> Choice Selection	As determined by course designer.
	<u>X</u> Specific Recall	
	<u>X</u> Composed/Created	
	b. Performance	
	<u>X</u> Indication	Touch control on PLATO display.
	<u>  </u> Manipulation	
	<u>X</u> Read/Interpret	Performance assessed by response
	<u>  </u> Listen/Interpret	matching or not matching course
	<u>  </u> Voice Composition	designer pre-determined answer.
	<u>X</u> Situation Evaluation	With situation on screen or print
	<u>X</u> Decide Action	exhibits.
	H.2.4.3 TRAINING MANAGEMENT:	
	a. Feedback	
	<u>X</u> Informative	As provided by course designer.
	<u>X</u> Evaluative	
	<u>X</u> Corrective	
	<u>X</u> Summary	
	<u>X</u> Immediate	
	<u>X</u> Delayed	
	b. Presentation Control	
	<u>X</u> Learner	Self-paced, individualized. Continue
	<u>X</u> Media	and pace trainee response. Only as
	<u>  </u> Instructor	programmed by course designer.



FAMILY: H  
MEMBER: 2

H.2.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

c. Sequencing

<u>X</u> Linear	<u>Sequence based on lesson designing</u>
<u>X</u> Response Branching	<u>each response, response history, or</u>
<u>X</u> History Branching	<u>learner control keys (e.g., HELP).</u>
<u>X</u> Repetitive Practice	<u>Permits drill to standards.</u>

d. Recordkeeping

<u>X</u> Automatic (Temporary Storage)	<u>Part or all of lesson</u>
<u>X</u> Automatic (Permanent Storage)	<u>execution. Transfer records</u>
<u>Manual</u>	<u>to tape.</u>
<u>None</u>	<u></u>

H.2.5 SETTING:

H.2.5.1 X INSTITUTIONAL

<u>Service School</u>	<u>Can be established at institution</u>
<u>Army Training Ctr (ATC)</u>	<u>with remote tie-in to regional</u>
<u>Div/Post Installation Schools</u>	<u>computer for each terminal station.</u>

H.2.5.2 X UNIT

<u>In-System (Embedded)</u>	<u>Wherever remote PLATO terminals</u>
<u>Job-Station</u>	<u>can be established to tie-in to</u>
<u>X</u> Individual Learning Ctr (ILC)	<u>regional computer facility</u>
<u>Barracks/Home</u>	<u>with operational PLATO system.</u>
<u>X</u> Garrison Training Area	<u></u>
<u>Local Training Area</u>	<u></u>
<u>Major Training</u>	<u></u>
<u>National Range</u>	<u></u>

FAMILY: H  
MEMBER: 2

H.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u> PLATO terminals, facility to house PLATO terminals and communications tie to a regional computer systems.
H.2.6	<u>EXPORTABILITY:</u> <input type="checkbox"/> In Units <input checked="" type="checkbox"/> Planning <input type="checkbox"/> No Unit/Schools access possible. Current plans unknown.	
H.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	PLATO operates at Computer-based Educa-
	<input type="checkbox"/> Future Date	tion Research Laboratory (CEFL) U. of
	<input type="checkbox"/> Unknown	Illinois and Control Data Corporation.
H.2.6.2	METHOD:	Some army groups have remote-access link.
	<input type="checkbox"/> Mail/Ship	
	<input checked="" type="checkbox"/> Install	PLATO installation on adequate Army
	<input checked="" type="checkbox"/> Remote Access (Telecommunications)	computer. Tie terminals to
	<input type="checkbox"/> In System	regional PLATO system at CERL or Control
	<input type="checkbox"/> Job Materials	Data Corporation.
H.2.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	Precise plans unknown.
	<input type="checkbox"/> Unit Issue	
H.2.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	CERL, University of Illinois and Control
	<input type="checkbox"/> Probable	Data Corporation.
	<input type="checkbox"/> Unknown	



FAMILY: HMEMBER: 3

H.2.8	COST DATA:	COMMENTS
H.2.8.1	SYSTEM ACQUISITION:	
	<input checked="" type="checkbox"/> High	\$400 per PLATO terminal plus line tie
	<input type="checkbox"/> Medium	charges to regional computer facility.
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
H.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Operate remote terminals. Phone line
	<input type="checkbox"/> None	changes to remote computer. CPU hourly costs. File storage costs.
H.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Maintain terminals.
	<input type="checkbox"/> None	
H.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input checked="" type="checkbox"/> High	Incorporate graphic displays into
	<input type="checkbox"/> Medium	instructional sequences.
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
H.2.9	TRAINEE PREREQUISITES:	
	<input type="checkbox"/> Education	
	<input checked="" type="checkbox"/> Physical Skills	Operate PLATO terminal keyboard.
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input checked="" type="checkbox"/> Aptitudes	Read/interpret textual graphic displays.
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Depends on course materials.
	<input type="checkbox"/> None	



FAMILY: H

MEMBER: 3

H.2.10 ADDITIONAL COMMENTS SHEET:

FAMILY: H  
 MEMBER: 3

H	<u>FAMILY:</u> COMPUTER-ASSISTED/MANAGED INSTRUCTION (CAI/CMI)													
3	<u>MEMBER:</u> ABACUS Computerized Training System (CTS)													
H.3.1	<u>SOURCE/PROPONENT:</u> Sponsored by TRADOC. Supervised by Communicative Technology Directorate, ATSC. Operational Test Site: USASIGS, Ft.Gordan, GA.													
H.3.2	<u>DESCRIPTION:</u> Project ABACUS, is an experimental Computerized Training System (CTS) that utilizes a multi-minicomputer-based configuration to provide self-paced individual instruction. CTS is designed for a hardware configuration of six PDP-11/35 minicomputers to support up to 128 terminals in 32-terminal configurations. As required, this basic configuration can be expanded or reduced to accommodate local training requirements. The CTS is the key media in a multi-media environment. CTS provides the basis for computer-managed instruction (CMI) used to control and apply off-line instruction via other media such as slides, video tape, textbooks, audio/visual devices, training aids, etc. CTS may also be used in a computer/assisted instruction (CAI) mode which provides for self-paced instruction where the student interacts directly with the computer at his terminal through the keyboard and video monitor device. The CTS terminal is a GTE Sylvania Challenger 4000 modified to meet the CTS on-line graphics requirements. In the on-line mode, the trainee receives instruction at the terminal device and enters his response using the available console keyboard. The CTS software evaluates the response using a number of features that are provided within the system and determines the next instructional segment to be presented. CTS also provides pre and post-testing, student scoring and record keeping. The CTS capability can be provided to distant facilities in two ways: (1) by installing a hardware/software subsystem at that location and communicating with (Continued on next page)													
H.3.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 15%;"><u>X</u></td> <td style="width: 15%;">Individual</td> <td>Self-paced, individual instruction. Used in CMI for on-line testing and individualized assignment of other training media. Has potential for on-line</td> </tr> <tr> <td><u>    </u></td> <td>Collective</td> <td>multimedia CAI.</td> </tr> <tr> <td><u>    </u></td> <td></td> <td></td> </tr> <tr> <td><u>    </u></td> <td></td> <td></td> </tr> </table>		<u>X</u>	Individual	Self-paced, individual instruction. Used in CMI for on-line testing and individualized assignment of other training media. Has potential for on-line	<u>    </u>	Collective	multimedia CAI.	<u>    </u>			<u>    </u>		
<u>X</u>	Individual	Self-paced, individual instruction. Used in CMI for on-line testing and individualized assignment of other training media. Has potential for on-line												
<u>    </u>	Collective	multimedia CAI.												
<u>    </u>														
<u>    </u>														

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H.3.2 DESCRIPTION: (Cont'd)

the main CTS facility through a modem, or (2) through a mobile classroom. A hardware/software subsystem with up to 32 terminals and an additional disk drive to hold course material, can be van mounted. Course material is generated at the main CTS facility and is copied to a disk to run on the van mounted subsystem. As course material is changed or added it is only necessary to update the disk maintained in the van. Normal courseware development occurs by authors using the system language CLASS I. The courseware can be executed and edited at the terminal and then placed in permanent storage for later use.

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H.3.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
H.3.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>X</u> Unit Organization & Job Duties	<u>Courseware can be developed to provide instruction in component procedures and techniques.</u>
	<u>X</u> Tool Applications to Unit Job Duties	<u>Courseware is basically off-line material. Augmented as appropriate by on-line CAI tests or instruction.</u>
	<u>X</u> Component Procedures	
	<u>X</u> Task/Situation Practice	<u>Practice in CMI or on-line CAI modes, depending on task.</u>
	<u>    </u> Small-Team	
	<u>    </u> Larger-Team	
	<u>    </u> Multi-Unit	
	<u>    </u> Command Staff Exercise	
H.3.3.2	LEVEL OF EVALUATION:	
	<u>X</u> Module Test	<u>Extensive on-line testing in CMI mode.</u>
	<u>X</u> Lesson Items	<u>Performance can be assessed within or at lesson end.</u>



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H.3.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	On-line testing to assess performance. Instruction presented in
	<u>X</u> Written (keyboard entry)	different forms of media to include CAI. Testing requires keyboard
	<u>    </u> Hands-On	responses.
	<u>    </u> Performance Certification	
	<u>    </u> Team Exercise/ARTEP:	
	Positions or echelons interacting:	
H.3.4	<u>CAPABILITIES:</u>	
H.3.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	Displayable character set and symbols of
	<u>X</u> Special Symbolology	CTS GTE terminal. Off-line media can use
	<u>X</u> 2-D Graphics	any available character/graphics.
	<u>    </u> 3-D Graphics	
	<u>X</u> Static Displays	On-line and off-line textual & graphic/pictorial displays.
	<u>X</u> Motion	Off-line instructional media.
	<u>    </u> Color	Off-line exhibits & instructional media.
	b. Auditory	
	<u>    </u> Signals/Tones	As designed for off-line media.
	<u>    </u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

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H.3.4.2 RESPONSE:		COMMENTS
a. Verbal/Symbolic		
<input checked="" type="checkbox"/> Choice Selection	<u>As determined by course designer for</u>	
<input checked="" type="checkbox"/> Specific Recall	<u>on-line &amp; off-line instruction.</u>	
<input checked="" type="checkbox"/> Composed/Created	<u>Limited to single line at terminal.</u>	
b. Performance		
<input type="checkbox"/> Indication	<u>Performance assessed by responses</u>	
<input type="checkbox"/> Manipulation	<u>matching or not matching course</u>	
<input checked="" type="checkbox"/> Read/Interpret	<u>designer predetermined answers.</u>	
<input checked="" type="checkbox"/> Listen/Interpret	<u></u>	
<input type="checkbox"/> Voice Composition	<u></u>	
<input checked="" type="checkbox"/> Situation Evaluation	<u>Screen presentations or descriptive</u>	
<input checked="" type="checkbox"/> Decide Action	<u>narrative.</u>	
H.3.4.3 TRAINING MANAGEMENT:		
a. Feedback		
<input checked="" type="checkbox"/> Informative	<u>As provided by course designer.</u>	
<input checked="" type="checkbox"/> Evaluative	<u></u>	
<input checked="" type="checkbox"/> Corrective	<u></u>	
<input checked="" type="checkbox"/> Summary	<u></u>	
<input checked="" type="checkbox"/> Immediate	<u></u>	
<input checked="" type="checkbox"/> Delayed	<u></u>	
b. Presentation Control		
<input checked="" type="checkbox"/> Learner	<u>Self-paced, individual instruction.</u>	
<input checked="" type="checkbox"/> Media	<u>Branching control</u>	
<input checked="" type="checkbox"/> Instructor	<u>As programmed by course designer.</u>	

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H.3.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<u>X</u> Linear	<u>Off-line instruction.</u>
	<u>X</u> Response Branching	<u>On-line instruction depends on lesson</u>
	<u>X</u> History Branching	<u>design &amp; how trainee responds.</u>
	<u>X</u> Repetitive Practice	
	d. Recordkeeping	
	<u>X</u> Automatic (Temporary Storage)	<u>Performance records provided.</u>
	<u>  </u> Automatic (Permanent Storage)	<u>Disk storage of performance</u>
	<u>  </u> Manual	<u>records. Reports output on</u>
	<u>  </u> None	<u>system printer.</u>
H.3.5	<u>SETTING:</u>	
H.3.5.1	<u>X</u> INSTITUTIONAL	
	<u>X</u> Service School	<u>CTS available at USASIGS, Ft. Gordon.</u>
	<u>  </u> Army Training Ctr (ATC)	
	<u>  </u> Div/Post Installation	
	<u>  </u> Schools	
H.3.5.2	<u>X</u> UNIT	
	<u>  </u> In-System (Embedded)	<u>1. Can be provided via remote</u>
	<u>  </u> Job-Station	<u>terminal to a locally installed CTS</u>
	<u>X</u> Individual Learning Ctr (ILC)	<u>hardware/software subsystem</u>
	<u>  </u> Barracks/Home	<u>using a modem.</u>
	<u>X</u> Garrison Training Area	<u>2. Mobile classroom van configura-</u>
	<u>  </u> Local Training Area	<u>tion.</u>
	<u>  </u> Major Training	
	<u>  </u> National Range	

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H.3.7	<u>SUPPORT REQUIREMENTS:</u>	
		<u>COMMENTS</u>
H.3.7.1	<u>LOGISTICAL SUPPORT:</u>	
	<u>X</u> Storage Areas	To support CTS hardware/software and student terminals.
	<u>X</u> Spare Parts	
	<u>X</u> Additional Copies On Hand	For off-line instructional materials.
	<u>X</u> Expendable Material	For off-line instructional material (printed) and exhibits.
H.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>    </u> No	
	<u>    </u> Operator	
	<u>X</u> Organizational Maintenance	For remote terminal.
	<u>X</u> Direct Support Maintenance	CTS hardware and software.
	<u>X</u> General Support Maintenance	CTS central facility.
	<u>    </u> Depot Maintenance	
H.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>5</u></u>	
	<u>X</u> System Operators	
	<u>X</u> Instructors/Facilitators	Classroom proctors.
	<u>    </u> Simulation/Monitor Positions	
	<u>X</u> Support Personnel	System programmer, instructional materials monitors. Administrators.
H.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> Special Personnel Skills	CLASS I language and other off-line media
	<u>X</u> Special Equipment	developmental techniques. Remote
	<u>X</u> Facility	terminals as required for off-line
	<u>    </u> Reproduction	materials. Classroom or student terminal
	<u>X</u> Update	area. Edit existing material.

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H.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
H.3.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	Attempted data gathering with ATSC.
	<input type="checkbox"/> Medium	No information available.
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
H.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
H.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
H.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input checked="" type="checkbox"/> Medium	With experienced personnel and use of
	<input type="checkbox"/> Low	graphics for CAI materials.
	<input type="checkbox"/> None	
H.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input checked="" type="checkbox"/> Physical Skills	Operate remote terminal keyboard.
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input checked="" type="checkbox"/> Aptitudes	Able to read textual material.
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

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H.1.10 ADDITIONAL COMMENTS SHEET:

## EMBEDDED TRAINING (ET)

Embedded training delivery systems make use of computerized tactical data systems as a means of providing individual or collective training. The basic approach is to embed training subsystem packages within the operational system and then to use the system itself to present and manage user training. In addition to training in system-specific skills, embedded training programs may be used to provide training in MOS-related skills, and general educational topics.

The embedded training delivery system consists of a compatible software operating system, training courseware in computer-manipulable form and associated user procedures. The software system is used to construct, deliver, and control the administration of the training courseware using the operational system data processing and display capabilities. The courseware consists of the actual training materials (e.g., lessons, performance tests, scenario events) and associated data bases such as student identities and performance histories. The software system may be configured to operate either independently of, under control of, or sharing functions with the operating system executive and applications software.

An embedded training capability supports individual training by using the operational computer system to present the training materials (lessons, tests, practical exercises) to the trainee via an interactive console. Responses to each lesson segment (or frame) are scored and evaluated. Decision rules incorporated in the instructional program are used to determine instructional sequencing and performance feedback. Thus, presentation of the instruction is individualized in accordance with the learning needs of the individual trainee. System users will generally include authors (lesson builders) as well as trainees and instructional system managers.

An embedded training capability supports team training by providing scenario events to several trainees at operational consoles that approximate those to



#### EMBEDDED TRAINING (ET) (Cont'd)

be encountered in actual tactical operations. Trainees interpret and respond to the scenario events and displays with console actions as they would in tactical situations. The primary training inputs are pre-planned training tapes (or other computer-readable media) containing scenario events and supporting data bases which are presented to the trainees at the operational consoles. During the training session, trainee actions and the results of these actions are recorded and processed to provide performance evaluations and feedback.

A major advantage of embedded training is that it permits the trainee to receive training in an operational setting where transference of system-specific skills is high. Even non-related system training permits system users additional practice on system equipment. In addition, embedded training maximizes system usage by using the operational system for training needs when the system is not required for operational use.

FAMILY: I

MEMBER CHARACTERISTICS TABLE

MEMBER	Training Method		Training Level	Setting		Available Date	Acquisition & Courseware Costs					Presentati		
	I	C	1 - 8	I	U		High 5	Med 4	Low 3	2	1	V	A	T
1. Operational TACFIRE PLANIT (OTP)	X		3	X	X	UNK				X		X		
2. TACFIRE Training System (TTS)	X		4	X	X	78-79		X				X	X	X
3. TACFIRE Subsystem Team Training (TSTT)		X	5	X	X	78-79		X				X	X	X

FAMILY: I

MEMBER: 1

I	<u>FAMILY:</u> EMBEDDED TRAINING (ET)	
1	<u>MEMBER:</u> Operational TACFIRE PLANIT	
I.1.1	<u>SOURCE/PROPONENT:</u> Director, Combat Developments, TACFIRE Team, USAFAS. Procurement: ARI, USAECOM, PM ARTADS	
I.1.2	<p><u>DESCRIPTION:</u> Operational TACFIRE PLANIT (OTP) is an embedded system that uses the CAI system PLANIT (<u>Programming LANGUAGE for Interactive Teaching</u>) to present on-line automated instruction to TACFIRE personnel at ACC/ELP, VMED or MIOD console stations. The student configuration uses a single TACFIRE computer set to control one ACC/ELP operator station and up to seven VMEDs or MIODs for trainee use. OTP is designed to provide individual, positional training of TACFIRE operators in component procedures in equipment operation, format call-up, data entry/data interpretation and processing of TACFIRE formats. OTP is loaded into the TACFIRE operational computer by a system operator and is then ready for instructional use by TACFIRE trainees. The trainee logs-on to the system and requests the lesson of his choice which is presented to him at the operational console. The trainee proceeds through the instructional material at his own pace. The trainee keys in his response using the alphanumeric keyboard of the console. OTP evaluates the response using a number of features that are provided within the system and determines the next instructional segment to be presented. Performance records are automatically maintained by the system which can be processed by the system operator. This is in addition to an interactive record which is printed at ACC/ELP station. The trainee can end an on-line session and then resume instruction at a later date and be automatically returned to the appropriate position in the instructional material.</p> <p style="text-align: right;">(Continued on next page)</p>	
I.1.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <p style="text-align: right;"><u>COMMENTS</u></p> <p><u>X Individual</u> <u>Up to 8 student stations, individual self-paced instruction. User stations operate simultaneously, but independently. TACFIRE operations programs are pre-empted when OTP is in use for training.</u></p> <p><u>Collective</u> _____</p> <p>_____</p>	

FAMILY I  
MEMBER 1

I.1.2	<p><u>DESCRIPTION:</u> (Cont'd)</p> <p>Lessons can be linked to form an instructional segment (module) with movement among lessons being invisible to the trainee. Lessons can be developed, executed, and edited on-line by the author and then entered into the permanent lesson file by the system operator. Existing courseware can be immediately updated to reflect necessary changes through the use of the OTP editing capabilities. On-line instructional material may be augmented by off-line exhibits.</p> <p>Available at USAFAS and exportable with TACFIRE system.</p>
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FAMILY: IMEMBER: 1

I.1.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
I.1 3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Unit Organization & Job Duties	<u>Courseware can be developed to</u> <u>provide training up to level</u> <u>indicated.</u>
	<input checked="" type="checkbox"/> Tool Applications to Unit Job Duties	<u>Equipment familiarity and TACFIRE</u> <u>operator station procedures are</u> <u>taught. Use of external equipment</u>
	<input checked="" type="checkbox"/> Component Procedures	<u>ELP, DPM also covered in course-</u> <u>ware</u>
	<input type="checkbox"/> Task/Situation Practice	<u></u> <u></u> <u></u>
	<input type="checkbox"/> Small-Team	<u></u> <u></u> <u></u>
	<input type="checkbox"/> Larger-Team	<u></u> <u></u> <u></u>
	<input type="checkbox"/> Multi-Unit	<u></u> <u></u> <u></u>
	<input type="checkbox"/> Command Staff Exercise	<u></u> <u></u> <u></u>
I.1 3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Pre and post tests provided for</u> <u>each module.</u>
	<input checked="" type="checkbox"/> Lesson Items	<u>Tests of behavioral objectives</u> <u>occur at lesson end, embedded test</u> <u>items also provided. Summary of</u> <u>performance indicated.</u>

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I.1.4.2	RESPONSE:	<u>COMMENTS</u>
	<p>a. Verbal/Symbolic</p> <p><u>X</u> Choice Selection</p> <p><u>X</u> Specific Recall</p> <p><u>X</u> Composed/Created</p> <p>b. Performance</p> <p><u>    </u> Indication</p> <p><u>    </u> Manipulation</p> <p><u>X</u> Read/Interpret</p> <p><u>    </u> Listen/Interpret</p> <p><u>    </u> Voice Composition</p> <p><u>X</u> Situation Evaluation</p> <p><u>X</u> Decide Action</p>	<p>As determined by course design.</p> <p>Formats, Data Entry, procedures.</p> <p>Single line entries.</p> <p></p> <p>Formats</p> <p></p> <p>TACFIRE functional areas.</p> <p>Process different types of missions.</p>
I.1.4.3	<p>TRAINING MANAGEMENT:</p> <p>a. Feedback</p> <p><u>X</u> Informative</p> <p><u>X</u> Evaluative</p> <p><u>X</u> Corrective</p> <p><u>X</u> Summary</p> <p><u>X</u> Immediate</p> <p><u>X</u> Delayed</p> <p>b. Presentation Control</p> <p><u>X</u> Learner</p> <p><u>X</u> Media</p> <p><u>    </u> Instructor</p>	<p>Capability exists for all types under control of course developer.</p> <p></p> <p></p> <p></p> <p></p> <p></p> <p>Self paced, individual instruction.</p> <p>Can time and pace trainee response.</p> <p>Only as programmed by course designer.</p>

FAMILY: I

MEMBER: 1

I.1.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

c. Sequencing

<u>X</u> Linear	<u>Sequence based on lesson design and</u>
<u>X</u> Response Branching	<u>how trainee responds. Decisions are</u>
<u>X</u> History Branching	<u>based on performance records over an</u>
<u>X</u> Repetitive Practice	<u>instructional sequence.</u>

d. Recordkeeping

<u>X</u> Automatic (Temporary Storage)	<u>Performance records can be</u>
<u>X</u> Automatic (Permanent Storage)	<u>output at ELP.</u>
<u>Manual</u>	<u>Tape and interactive record</u>
<u>None</u>	<u>at ELP.</u>

I.1.5 SETTING:

I.1.5.1 X INSTITUTIONAL

<u>X</u> Service School	<u>Available at USAFAS. Can be used</u>
<u>Army Training Ctr (ATC)</u>	<u>wherever TACFIRE equipment is</u>
<u>Div/Post Installation</u>	<u>available.</u>
<u>Schools</u>	

I.1 5.2 X UNIT

<u>X</u> In-System (Embedded)	<u>Can be used at unit level if</u>
<u>X</u> Job-Station	<u>TACFIRE system is available for</u>
<u>Individual Learning Ctr (ILC)</u>	<u>training use.</u>
<u>Barracks/Home</u>	
<u>X</u> Garrison Training Area	
<u>X</u> Local Training Area	
<u>X</u> Major Training	
<u>National Range</u>	



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I.1.5.3	<u>X</u> REQUIREMENTS:	<u>COMMENTS</u>
		<u>TACFIRE computer set, ACC/ELP console and VMED or MIOD to serve as</u> <u>student consoles, PLANIT CAI system loaded on-computer.</u>
I.1.6	<u>EXPORTABILITY:</u>	
	<u>    In Units</u> <u>X</u> <u>Planning</u> <u>    No</u> <u>Can be exported, plans not known.</u>	
I.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>X</u> Currently Available	<u>At USAFAS.</u>
	<u>    Future Date</u>	<u>                                </u>
	<u>    Unknown</u>	<u>                                </u>
I.1.6.2	METHOD:	
	<u>    Mail/Ship</u>	<u>                                </u>
	<u>X</u> Install	<u>With TACFIRE system.</u>
	<u>    Remote Access (Telecommunications)</u>	<u>                                </u>
	<u>X</u> In System	<u>Loaded in TACFIRE system.</u>
	<u>    Job Materials</u>	<u>                                </u>
I.1.6.3	BASIS OF ISSUE:	
	<u>    On Demand</u>	<u>                                </u>
	<u>X</u> Unit Issue	<u>As TACFIRE is programmed for units.</u>
I.1.6.4	SOURCE:	
	<u>X</u> Known	<u>USAFAS TACFIRE team.</u>
	<u>X</u> Probable	<u>USAECON and PM ARTADS.</u>
	<u>    Unknown</u>	<u>                                </u>

FAMILY: IMEMBER: 1

I.1.7	<u>SUPPORT REQUIREMENTS:</u>	
I.1.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Lessons stored in TTCs.</u>
	<input type="checkbox"/> Spare Parts	<u></u>
	<input type="checkbox"/> Additional Copies On Hand	<u></u>
	<input checked="" type="checkbox"/> Expendable Material	<u>Off-line exhibits used with on-line lessons.</u>
I.1.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>As required by OTP.</u>
	<input type="checkbox"/> Operator	<u></u>
	<input checked="" type="checkbox"/> Organizational Maintenance	<u>OTP system and lesson file.</u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
I.1.7.3	<u>MANNING REQUIREMENTS: Total = <u>2</u></u>	
	<input checked="" type="checkbox"/> System Operators	<u>Unload TACFIRE software, load OTP.</u>
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>May be required for full student</u>
	<input type="checkbox"/> Simulation/Monitor Positions	<u>configuration.</u>
	<input type="checkbox"/> Support Personnel	<u></u>
I.1.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>OTP and TACFIRE use.</u>
	<input checked="" type="checkbox"/> Special Equipment	<u>Lesson tapes (TTCs).</u>
	<input checked="" type="checkbox"/> Facility	<u></u>
	<input type="checkbox"/> Reproduction	<u></u>
	<input checked="" type="checkbox"/> Update	<u>Edit existing material to reflect change.</u>

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I.1.8	<u>COST DATA:</u>	<u>COMMENTS</u>
I.1.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Army has hardware and software. Must
	<input checked="" type="checkbox"/> None	acquire and load master OTP tape.
I.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Cost to operate TACFIRE equipment during
	<input type="checkbox"/> None	sessions dedicated to training.
I.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Tape system requiring minimum
	<input type="checkbox"/> None	maintenance.
I.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	\$5,000 per lesson hour with experienced
	<input checked="" type="checkbox"/> Medium	personnel. Developmental time estimated
	<input type="checkbox"/> Low	to be 150:1 per instructional hour
	<input type="checkbox"/> None	Update immediate and costs are low.
I.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input checked="" type="checkbox"/> Physical Skills	Able to operate console keyboard.
	<input type="checkbox"/> Mental Skills	Must be familiar with Field Artillery
	<input checked="" type="checkbox"/> MOS Requirements	Operations.
	<input checked="" type="checkbox"/> Aptitudes	Textual display requires reading.
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: I

MEMBER: 1

I.1.10 ADDITIONAL COMMENTS SHEET:



FAMILY: 1

MEMBER: 2

I	<u>FAMILY:</u> EMBEDDED TRAINING (ET)	
2	<u>MEMBER:</u> TACFIRE Training System (TTS)	
I.2.1	<u>SOURCE/PROPONENT:</u> Director, Combat Developments, TACFIRE Team, USAFAS Procurement: ARI, USAECOM, PM ARTADS	
I.2.2	<u>DESCRIPTION:</u> The TACFIRE Training System (TTS) supports TACFIRE/PLANIT computer programs which present CAI lesson material to trainees using TACFIRE hardware. The TTS is configured primarily from TACFIRE system equipment to provide a multi-station ACC/ELP or VMED individual self-paced training capability. The configuration provides a single computer set to control one ACC/ELP operator station, and up to twelve ACC/ELP student stations, up to twelve VMED student stations, or any mix of twelve ACC/ELP or VMED student stations. The equipment configuration, computer programs and lesson materials are designed to be used in a school (USAFAS) environment, or on a fielded tactical system (Bn FDC or DivArty). PLANIT ( <u>Pro</u> - <u>gramming</u> <u>LAN</u> guage for <u>I</u> nteractive <u>T</u> eaching) has been modified to allow, in addition to normal lesson instruction (in which instruction is presented on the student station display and responses are entered using the available student station keyboard), a CONTROL mode in which the ACC is controlled so that TACFIRE system operations can be simulated under PLANIT lesson control. Under the control mode the display screens of the student station may be fully utilized as well as the terminal switches, indicators, display formats and modes of operation. PLANIT is loaded into the TACFIRE	
	(Continued on next page)	
I.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	
	<u>COMMENTS</u>	
	<u>X</u> Individual	Self paced individualized instruction and hands-on practice in operator procedures and techniques
		using the console switches, indicators, display
		formats and mode of operation. Permits computer-
	<u>Collective</u>	mediated practice at operator stations.

FAMILY: I

MEMBER: 2

I.2.2

DESCRIPTION: (Cont'd)

operational computer by a system operator and is then ready for instructional use by TACFIRE trainees. The trainee logs-on to the system and requests the lesson of his choice which is presented to him at the operational console. The trainee proceeds through the instructional material at his own pace. The trainee keys in his response using the alphanumeric keyboard of his console (NORMAL mode) or uses the actual console switches (CONTROL mode) which are interpreted by PLANIT. PLANIT evaluates the response using a number of features that are provided within the system and determines the next instructional segment to be presented. Performance records are automatically maintained by the system which can be processed by the system operator. The trainee can end an on-line session and then resume instruction at a later date and be automatically returned to the appropriate position in the instructional material. Lessons can be linked to form an instructional segment (module) with movement among lessons being invisible to the trainee. Lessons can be developed off-line by lesson authors and entered into the PLANIT lesson file as a card image tape. On-line lesson execution and checkout is then possible. Existing courseware can be immediately updated to reflect necessary changes through use of the PLANIT editing capabilities. On-line instructional material may be augmented by off-line exhibits.

Software design specs complete. Scheduled for availability 1979-80 on USAFAS configurations.

FAMILY: IMEMBER: 2

I.2.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
I.2.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Unit Organization & Job Duties	<u>Courseware can be developed up</u> <u>to level indicated. Actual use</u> <u>and interpretation of console</u> <u>button action is permitted.</u>
	<input checked="" type="checkbox"/> Tool Applications to Unit Job Duties	<u>Call up and data entry into</u> <u>TACFIRE formats provides</u>
	<input checked="" type="checkbox"/> Component Procedures	<u>practice with situational</u> <u>procedures.</u>
	<input checked="" type="checkbox"/> Task/Situation Practice	
	<input type="checkbox"/> Small-Team	
	<input type="checkbox"/> Larger-Team	
	<input type="checkbox"/> Multi-Unit	
	<input type="checkbox"/> Command Staff Exercise	
I.2.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>On-line post tests for each</u> <u>module.</u>
	<input checked="" type="checkbox"/> Lesson Items	<u>Enroute testing at lesson level</u> <u>is provided. End of lesson test</u> <u>is provided.</u>

FAMILY: I

MEMBER: 2

I.2.3.3 LEVEL OF EVALUATION (CONT'D)

COMMENTS

X Individual Performance/SQT

CONTROL mode permits computer-  
mediated practice using actual  
operator console.

X Written

User may enter data into TACFIRE  
format and have PLANIT interpret  
results.

X Hands-On

X Performance Certification

Team Exercise/ARTEP:

Positions or echelons  
interacting:

I.2.4 CAPABILITIES:

I.2.4.1 PRESENTATION:

a. Visual

X Alphanumeric

Displayable character set at console  
stations.

X Special Symbology

2-D Graphics

3-D Graphics

Off-line exhibits. Observable equipment.

X Static Displays

Information displayed on display screens  
using full 7 lines.

Motion

Color

Lighted switches/indicators. Off-line  
exhibits.

b. Auditory

X Signals/Tones

As occurs in processing instructional  
material in control mode.

Speech

c. Tactile

X Size/Shape

Switch panel assembly and function keys.

X Positional Cues



FAMILY: I  
MEMBER: 2

I.2.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>X</u> Choice Selection	<u>As determined by courseware.</u>
	<u>X</u> Specific Recall	
	<u>X</u> Composed/Created	<u>Console keyboard in NORMAL mode.</u>
	b. Performance	
	<u>X</u> Indication	<u>Can use console switches in CONTROL</u>
	<u>X</u> Manipulation	<u>mode.</u>
	<u>X</u> Read/Interpret	<u>Formats.</u>
	<u>    </u> Listen/Interpret	
	<u>    </u> Voice Composition	
	<u>X</u> Situation Evaluation	<u>Computer-mediated practice.</u>
	<u>X</u> Decide Action	<u>Process different types of missions.</u>
	I.2.4.3 TRAINING MANAGEMENT:	
	a. Feedback	
	<u>X</u> Informative	<u>Capability exists for all types under</u>
	<u>X</u> Evaluative	<u>control of course developer.</u>
	<u>X</u> Corrective	
	<u>X</u> Summary	
	<u>X</u> Immediate	
	<u>X</u> Delayed	
	b. Presentation Control	
	<u>X</u> Learner	<u>Self-paced, individual instruction.</u>
	<u>X</u> Media	<u>Can time, and pace trainee response.</u>
	<u>    </u> Instructor	<u>Only as programmed by course designer.</u>

FAMILY: I  
MEMBER: 2

I.2.4.3	<p>TRAINING MANAGEMENT (CONT'D)</p> <p style="text-align: right;"><u>COMMENTS</u></p> <p>c. Sequencing</p> <p><u>X</u> Linear <u>Sequence based on lesson design and</u>  <u>X</u> Response Branching <u>how trainee responds. Decisions are</u>  <u>X</u> History Branching <u>based on performance over an instruc-</u>  <u>X</u> Repetitive Practice <u>tional sequence. Computer-mediated</u>  <u>practice.</u></p> <p>d. Recordkeeping</p> <p><u>X</u> Automatic (Temporary Storage) <u>32 active and inactive student</u>  <u>X</u> Automatic (Permanent Storage) <u>records is the minimum require-</u>  <u>Manual</u> <u>ment. Tape system with inter-</u>  <u>None</u> <u>active record at ELP.</u></p> <p>I.2.5 <u>SETTING:</u> <u>Intended for use in a Government-</u>  <u>furnished, air-conditioned lab-</u></p> <p>I.2.5.1 <u>X</u> INSTITUTIONAL <u>oratory type environment at USAFAS</u>  <u>Service School</u> <u>(Knox Hall). Two TTS sets with 8</u>  <u>Army Training Ctr (ATC)</u> <u>ACC/ELPs each, expandable to 13 is</u>  <u>Div/Post Installation</u> <u>current USAFAS TACFIRE training re-</u>  <u>Schools</u> <u>quirement.</u></p> <p>I.2.5.2 <u>UNIT</u></p> <p><u>X</u> In-System (Embedded) <u>Bn FDC or Div Arty FDC to include</u>  <u>X</u> Job-Station <u>up to 9 terminals.</u>  <u>Individual Learning Ctr (ILC)</u>  <u>Barracks/Home</u>  <u>X</u> Garrison Training Area  <u>X</u> Local Training Area  <u>X</u> Major Training  <u>National Range</u></p>
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FAMILY: I  
MEMBER: 2

I.2.5.3	<u>X</u> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Configured classroom to include TACFIRE hardware and software, VFMEs, ACC/ELP cabling, power sources, air-conditioning, chairs, booths, tables, cabinets, supplies and other related facility items.</u>
I.2.6	<u>EXPORTABILITY:</u>	
	<u>    In Units</u> <u>X</u> <u>Planning</u> <u>    No</u>	<u>USAFAS, also field tactical systems Bn FDC or Div Arty FDC.</u>
I.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>    Currently Available</u>	
	<u>X</u> <u>Future Date</u>	<u>1978-1979 at USAFAS.</u>
	<u>    Unknown</u>	
I.2.6.2	METHOD:	
	<u>    Mail/Ship</u>	
	<u>X</u> <u>Install</u>	<u>With TACFIRE system.</u>
	<u>    Remote Access (Telecommunications)</u>	
	<u>X</u> <u>In System</u>	<u>Loaded in TACFIRE system.</u>
	<u>    Job Materials</u>	
I.2.6.3	BASIS OF ISSUE:	
	<u>    On Demand</u>	
	<u>X</u> <u>Unit Issue</u>	<u>Plans in TRADOC TACFIRE Individual-Collective Training Plan.</u>
I.2.6.4	SOURCE:	
	<u>X</u> <u>Known</u>	<u>USAFAS TACFIRE team.</u>
	<u>X</u> <u>Probable</u>	<u>USAECON and PM ARTADS.</u>
	<u>    Unknown</u>	



FAMILY: I  
MEMBER: 2

I.2.7	<u>SUPPORT REQUIREMENTS:</u>	
		<u>COMMENTS</u>
I.2.7.1	<u>LOGISTICAL SUPPORT:</u>	
	<u>X</u> Storage Areas	<u>Part of configured TTS classroom.</u>
	<u>X</u> Spare Parts	<u>As required by TACFIRE. TTCs for</u>
	<u>    </u> Additional Copies On Hand	<u>lesson stroage and student records.</u>
	<u>X</u> Expendable Material	<u>Off-line exhibits.</u>
I.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>    </u> No	<u>As required by maintenance program</u>
	<u>X</u> Operator	<u>for TACFIRE operator consoles, com-</u>
	<u>X</u> Organizational Maintenance	<u>puter set and software. USAFAS</u>
	<u>X</u> Direct Support Maintenance	<u>TACFIRE Team.</u>
	<u>X</u> General Support Maintenance	<u>Initially, contractor.</u>
	<u>X</u> Depot Maintenance	
I.2.7.3	<u>MANNING REQUIREMENTS: Total = <u>5</u></u>	
	<u>X</u> System Operators	<u>Load TACFIRE/PLANIT system.</u>
	<u>X</u> Instructors/Facilitators	<u>Monitor TTS classrooms 1 per 15-20</u>
	<u>    </u> Simulation/Monitor Positions	<u>students.</u>
	<u>X</u> Support Personnel	<u>As required by TTS configuration</u>
I.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> Special Personnel Skills	<u>Lesson clerks, technicians, Training</u>
	<u>X</u> Special Equipment	<u>Managers.</u>
	<u>X</u> Facility	<u>Personnel familiar with PLANIT. course-</u>
	<u>    </u> Reproduction	<u>ware development, TACFIRE operations.</u>
	<u>X</u> Update	<u>Lesson tapes (TTCs).</u>
		<u>TTS configuration (USAFAS, Bn,</u>
		<u>DivArty).</u>
		<u>Edit material to reflect changes.</u>



FAMILY: 1MEMBER: 2

I.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
I.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
I.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Costs to operate TACFIRE equipment</u>
	<input type="checkbox"/> None	<u>during sessions dedicated to training.</u>
I.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	<u>Tape system and training cabling.</u>
	<input type="checkbox"/> None	
I.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input checked="" type="checkbox"/> High	<u>Must be familiar with PLANIT CONTROL mode.</u>
	<input type="checkbox"/> Medium	<u>(Usage experience data unavailable).</u>
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
I.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input checked="" type="checkbox"/> Physical Skills	<u>Able to operate TACFIRE consoles.</u>
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	<u>As specified for TACFIRE career field.</u>
	<input checked="" type="checkbox"/> Aptitudes	<u>Tactical display requires reading.</u>
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: I

MEMBER: 2

I.2.10 ADDITIONAL COMMENTS SHEET:

FAMILY: I  
 MEMBER: 3

I	<u>FAMILY: EMBEDDED TRAINING (ET)</u>	
3	<u>MEMBER: TACFIRE Subsystem Team Training (TSTT)</u>	
I.3.1	<u>SOURCE/PROPONENT:</u> Directorate Combat Developments, TACFIRE Team, USAFAS Procurement: PM ARTADS and USAFECOM	
I.3.2	<p><u>DESCRIPTION:</u> TACFIRE Subsystem Team Training (TSTT) is part of the TACFIRE Advanced Training Program to incorporate the concept of collective training within a TACFIRE environment. TSTT uses the TACFIRE system software and hardware as a base and then adds the necessary simulation routines for simulation of actual field exercises. Author/instructors use the available software support packages to develop team training scenarios supported by the necessary data base information. These scenarios are loaded into the TACFIRE system and presented to trainee participants at the ACC/ELP operator stations. The instructor has the option to designate external subscribers (e.g., VFMEDs for FSE or FSO positions) as active participants in the scenario exercise, or these positions can be simulated. Thus, a TACFIRE team of participants can be established with information entering the system as though from external sources (the scenario) for processing by the TACFIRE trainees. Data receipt by an external position is simulated, unless it has been designated as an active participant in which case full communication is possible. The rate and sequence in which the scenario events are presented can be controlled by the instructor using prescribed codes and formats in building the scenario. Information is presented to the trainees using the console display screen. The trainees enter their response or take action by using the switches and controls available at his console. TSTT analyzes each response to determine whether it is correct, incorrect, unexpected or an unrelated action (cannot be</p> <p style="text-align: right;">(Continued on next page)</p>	
I.3.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	<u>COMMENTS</u>
	<u>Individual</u>	_____
		_____
	<u>X Collective</u>	Permits simulation of team interaction between a FDC, FDC/ACCO, and FSE or FSO. External subscribers may be simulated or can be active participants with full communication.



I.3.2	<p><u>DESCRIPTION (Cont'd)</u></p> <p>correlated with mission event). The TSTT monitors the team's level of proficiency by determining whether the individual computer actions of team members have been taken in the allocated time (pre-determined by the instructor), the information entered or deleted from display TACFIRE formats is appropriate for TACFIRE operations and the transmit action has been taken. Each scenario step can be given a score by the instructor. When errors occur, points are subtracted from the specified value. The resulting scenario score indicates the team performance efficiency level. At the end of the on-line session, the event log and grading table can be output for review by the instructor and team members.</p> <p>Planned for operational use at USAFAS in 1978-1979 time period.</p>
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FAMILY: I

MEMBER: 3

I.3.3 TRAINING AND EVALUATION (CONT'D)

I.3.3.1 LEVEL OF TRAINING:

COMMENTS

☐ Unit Organization & Job Duties

☐ Tool Applications to Unit  
Job Duties

☐ Component Procedures

☐ Task/Situation Practice

☒ Small-Team

ACC operator interaction with  
external subscriber (FSO, FSE).

☐ Larger-Team

☐ Multi-Unit

☐ Command Staff Exercise

I.3.3.2 LEVEL OF EVALUATION:

☐ Module Test

☒ Lesson Items

Each scenario event can have an  
assigned score. Incorrect actions  
cause points to be subtracted from  
possible score.

FAMILY: I

MEMBER: 3

I.3.3	LEVEL OF EVALUATION (CONT'D)	
		<u>COMMENTS</u>
	<u>Individual Performance/SQT</u>	
	<u>Written</u>	
	<u>Hands-On</u>	
	<u>Performance Certification</u>	
	<u>X Team Exercise/ARTEP:</u>	<u>Not actually designed for ARTEPs.</u>
	<u>Positions or echelons interacting:</u>	<u>ACC with FSO, FSE positions.</u>
I.3.4	<u>CAPABILITIES:</u>	
I.3.4.1	<u>PRESENTATION:</u>	
	<u>a. Visual</u>	
	<u>X Alphanumeric</u>	<u>Displayable character set at console stations.</u>
	<u>X Special Symbology</u>	
	<u>2-D Graphics</u>	
	<u>3-D Graphics</u>	
	<u>X Static Displays</u>	<u>Information displayed on display screens</u>
	<u>Motion</u>	<u>using full 7 lines.</u>
	<u>X Color</u>	<u>Switch and indicator lights.</u>
	<u>b. Auditory</u>	
	<u>X Signals/Tones</u>	<u>Normal console operation.</u>
	<u>X Speech</u>	<u>Voice inputs over link or simulated participants.</u>
	<u>c. Tactile</u>	
	<u>X Size/Shape</u>	<u>Console switches and keys.</u>
	<u>X Positional Cues</u>	

MEMBER: 3

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FAMILY: I  
MEMBER: 3

I.3.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<u>X</u> Linear	Controlled by the scenario events and the
	<u>    </u> Response Branching	trainee team response to each event.
	<u>    </u> History Branching	
	<u>X</u> Repetitive Practice	
	d. Recordkeeping	
	<u>X</u> Automatic (Temporary Storage)	Event log and grading table are
	<u>    </u> Automatic (Permanent Storage)	maintained for each scenario
	<u>X</u> Manual	step. Per Training Management
	<u>    </u> None	Plan.
I.3.5	<u>SETTING:</u>	
I.3.5.1	<u>X</u> INSTITUTIONAL	
	<u>X</u> Service School	Planned for use at USAFAS in school
	<u>    </u> Army Training Ctr (ATC)	configuration.
	<u>    </u> Div/Post Installation Schools	
I.3.5.2	<u>X</u> UNIT	
	<u>X</u> In-System (Embedded)	Bn FDC or Div Arty FDC.
	<u>X</u> Job-Station	
	<u>    </u> Individual Learning Ctr (ILC)	
	<u>    </u> Barracks/Home	
	<u>X</u> Garrison Training Area	For mobile, fielded systems.
	<u>X</u> Local Training Area	
	<u>X</u> Major Training	
	<u>    </u> National Range	



FAMILY: I  
MEMBER: 3

I.3.5.3	<u>X</u> REQUIREMENTS:	<u>COMMENTS</u> TACFIRE hardware and software, TACFIRE Subsystem Software Programs, space for team configuration, cabling, other related facility items.
I.3.6	<u>EXPORTABILITY:</u>	
	<u>    In Units</u> <u>X</u> <u>Planning</u> <u>    No</u>	<u>Part of TACFIRE Advanced Training Program.</u>
I.3.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>    Currently Available</u>	
	<u>X</u> <u>Future Date</u>	<u>1978-1979 at USAFAS</u>
	<u>    Unknown</u>	
I.3.6.2	METHOD:	
	<u>    Mail/Ship</u>	
	<u>X</u> <u>Install</u>	<u>Part of TACFIRE Advanced Training Program.</u>
	<u>    Remote Access (Telecommunications)</u>	
	<u>X</u> <u>In System</u>	<u>For fielded systems.</u>
	<u>    Job Materials</u>	
I.3.6.3	BASIS OF ISSUE:	
	<u>    On Demand</u>	
	<u>X</u> <u>Unit Issue</u>	<u>As TACFIRE is scheduled for implementation.</u>
I.3.6.4	SOURCE:	
	<u>X</u> <u>Known</u>	<u>USAFAS TACFIRE Team.</u>
	<u>X</u> <u>Probable</u>	<u>USAECOM, PM ARTADS</u>
	<u>    Unknown</u>	

FAMILY: I

MEMBER: 3

I.3.7	<u>SUPPORT REQUIREMENTS:</u>	
		<u>COMMENTS</u>
I.3.7.1	<u>LOGISTICAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> <u>Storage Areas</u>	<u>As required by TACFIRE configuration.</u>
	<input checked="" type="checkbox"/> <u>Spare Parts</u>	<u>Tapes for scenario and records.</u>
	<u>Additional Copies On Hand</u>	
	<input checked="" type="checkbox"/> <u>Expendable Material</u>	<u>JPMs and other job related materials.</u>
I.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> <u>Yes</u> <u>    </u> <u>No</u>	<u>As required by maintenance program for</u>
	<input checked="" type="checkbox"/> <u>Operator</u>	<u>TACFIRE operator console, computer set</u>
	<input checked="" type="checkbox"/> <u>Organizational Maintenance</u>	<u>and software. USAFAS TACFIRE Team.</u>
	<input checked="" type="checkbox"/> <u>Direct Support Maintenance</u>	
	<input checked="" type="checkbox"/> <u>General Support Maintenance</u>	
	<input checked="" type="checkbox"/> <u>Depot Maintenance</u>	<u>Initially, contractor.</u>
I.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>3 or more.</u></u>	
	<input checked="" type="checkbox"/> <u>System Operators</u>	<u>Load software and scenario.</u>
	<input checked="" type="checkbox"/> <u>Instructors/Facilitators</u>	<u>Probably at least 1 per team.</u>
	<input checked="" type="checkbox"/> <u>Simulation/Monitor Positions</u>	<u>As required for scenario.</u>
	<input checked="" type="checkbox"/> <u>Support Personnel</u>	<u>As required to support program.</u>
I.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> <u>Special Personnel Skills</u>	<u>Skilled in TACFIRE operations and</u>
	<input checked="" type="checkbox"/> <u>Special Equipment</u>	<u>software to develop scenario tapes for</u>
	<u>Facility</u>	<u>scenarios.</u>
	<u>Reproduction</u>	
	<input checked="" type="checkbox"/> <u>Update</u>	<u>Edit material as required, using</u>
		<u>software.</u>

FAMILY: IMEMBER: 3

I.3.8	COST DATA:	<u>COMMENTS</u>
I.3.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
I.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
I.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
I.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input checked="" type="checkbox"/> High	Must be familiar with TACFIRE operations
	<input type="checkbox"/> Medium	and software scenario development
	<input type="checkbox"/> Low	requirements.
	<input type="checkbox"/> None	
I.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input checked="" type="checkbox"/> Physical Skills	Able to operate console stations.
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	As required for TACFIRE.
	<input checked="" type="checkbox"/> Aptitudes	Textual displays requires reading.
	<input type="checkbox"/> Schools/Courses	
	<input checked="" type="checkbox"/> Training	TACFIRE individual training completed.
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: 1

MEMBER: 3

I.3.10 ADDITIONAL COMMENTS SHEET:



## TRAINING DEVICES/SIMULATORS

Training devices and simulators are used primarily where the subject matter is too complex for verbal, symbolic, or simple pictorial presentation, or requires extensive hands-on practice for proper skills development.

Training devices are any three-dimensional object developed, fabricated, or procured specifically for improving the learning process. They can be used for individual or team training. Training devices may be categorized as systems devices or non-systems devices. Systems devices are designed for use with a material system or items of equipment including sub-assemblies or components, (e.g., training devices for the TOW missile system). Non-systems devices are designed to support general training or training not directly related to a specific material system, (e.g., a sand table). Training devices range in cost and may or may not be locally produced.

Equipment simulator-trainers are used to train personnel in tasks such as operations, emergency procedures, and maintenance of the operational system. They may be designed for part task, full task, individual, team, or total system training or any combination thereof. They can be designed to provide control over training by incorporating instructor monitoring of student actions and cues, situational "freezes" and/or recording so that specific student behaviors can be critiqued in depth. They are also designed so that personnel and equipment can be protected from the consequences of erroneous behavior. They may cost anywhere from a fraction to several times the cost of the equivalent operational equipment.

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FAMILY: J  
 MEMBER: 1

J	<u>FAMILY:</u> TRAINING DEVICES/SIMULATORS													
1	<u>MEMBER:</u> Sand Table													
J.1.1	<u>SOURCE/PROPONENT:</u> Training Aids Service Center, USAFAS. Self-made at unit level.													
J.1.2	<u>DESCRIPTION:</u>  Device used to substitute for terrain. Can range from a sketch in the dust to elaborate sand tables, to sophisticated terrain models. Effectively used to train soldiers in combat techniques and to evaluate their performance. Easily prepared wherever to be used, it will also train squad and platoon leaders to plan and conduct a tactical operation.													
J.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>  <div style="text-align: right;"><u>COMMENTS</u></div> <table> <tr> <td><u>X</u> Individual</td> <td>Individual squad tactics (infrequent usage).</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td><u>X</u> Collective</td> <td>Combat leadership training.</td> </tr> <tr> <td></td> <td></td> </tr> <tr> <td></td> <td></td> </tr> </table>		<u>X</u> Individual	Individual squad tactics (infrequent usage).					<u>X</u> Collective	Combat leadership training.				
<u>X</u> Individual	Individual squad tactics (infrequent usage).													
<u>X</u> Collective	Combat leadership training.													

FAMILY: J

MEMBER: 1

J.1.3 TRAINING AND EVALUATION (CONT'D)

J.1.3.1 LEVEL OF TRAINING:

COMMENTS

<input checked="" type="checkbox"/> Unit Organization & Job Duties	Individual squad tactics and combat leadership tasks.
<input type="checkbox"/> Tool Applications to Unit Job Duties	
<input checked="" type="checkbox"/> Component Procedures	
<input checked="" type="checkbox"/> Task/Situation Practice	
<input checked="" type="checkbox"/> Small-Team	Combat leadership tasks.
<input type="checkbox"/> Larger-Team	
<input type="checkbox"/> Multi-Unit	
<input type="checkbox"/> Command Staff Exercise	

J.1.3.2 LEVEL OF EVALUATION:

<input type="checkbox"/> Module Test	Under instructor control using adjunctive material.
<input type="checkbox"/> Lesson Items	



MEMBER: 1

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FAMILY: J

MEMBER: 1

J.1.4.3	TRAINING MANAGEMENT (CONT'D)		<u>COMMENTS</u>
	c. Sequencing		
	<input checked="" type="checkbox"/> Linear		All presented same scenario.
	<input checked="" type="checkbox"/> Response Branching		Real-time participant decisions may
	<input checked="" type="checkbox"/> History Branching		change mission conditions & responses
	<input checked="" type="checkbox"/> Repetitive Practice		required. Repeat mission until
			standards met.
	d. Recordkeeping		
	<input type="checkbox"/> Automatic (Temporary Storage)		
	<input type="checkbox"/> Automatic (Permanent Storage)		
	<input type="checkbox"/> Manual		
	<input checked="" type="checkbox"/> None		Unless implemented by instructor.
J.1.5	<u>SETTING:</u>		
J.1.5.1	<input checked="" type="checkbox"/> INSTITUTIONAL		
	<input type="checkbox"/> Service School		See J.1.
	<input type="checkbox"/> Army Training Ctr (ATC)		
	<input type="checkbox"/> Div/Post Installation Schools		
J.1.5.2	<input checked="" type="checkbox"/> UNIT		
	<input type="checkbox"/> In-System (Embedded)		
	<input checked="" type="checkbox"/> Job-Station		
	<input type="checkbox"/> Individual Learning Ctr (ILC)		
	<input type="checkbox"/> Barracks/Home		
	<input checked="" type="checkbox"/> Garrison Training Area		
	<input checked="" type="checkbox"/> Local Training Area		
	<input checked="" type="checkbox"/> Major Training		
	<input type="checkbox"/> National Range		

FAMILY: J

MEMBER: 1

J.1.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Sand table and sand. Dimensions can vary (e.g., 5' x 5' x 2').</u>
		<u>Optional equipment and terrain features to scale.</u>
J.1.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
J.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	
	<input type="checkbox"/> Future Date	
	<input type="checkbox"/> Unknown	
J.1.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	<u>TASC resources.</u>
	<input checked="" type="checkbox"/> Install	<u>Self-made, unit level.</u>
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
J.1.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u>Self-made.</u>
	<input type="checkbox"/> Unit Issue	
J.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Self-made or contact local TASC.</u>
	<input type="checkbox"/> Probable	
	<input type="checkbox"/> Unknown	



FAMILY: J  
MEMBER: 1

J.1.7	<u>SUPPORT REQUIREMENTS:</u>	
J.1.7.1	LOGISTICAL SUPPORT:	<u>COMMENTS</u>
	<input type="checkbox"/> Storage Areas	
	<input type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input checked="" type="checkbox"/> Expendable Material	<u>Sand, few strips of salvaged lumber</u>
J.1.7.2	MAINTENANCE REQUIREMENTS:	<u>from paint/plywood section.</u>
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
J.1.7.3	MANNING REQUIREMENTS: Total = <u>1</u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators	<u>One</u>
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
J.1.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input type="checkbox"/> Special Personnel Skills	
	<input checked="" type="checkbox"/> Special Equipment	<u>Trestles to hold table at slant.</u>
	<input checked="" type="checkbox"/> Facility	<u>TASC facilities.</u>
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY: JMEMBER: 1

J.1.8	<u>COST DATA:</u>	<u>COMMENTS</u>
J.1.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
J.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	Leadership duties.
	<input type="checkbox"/> Aptitudes	
	<input checked="" type="checkbox"/> Schools/Courses	Leadership, NCO school, FAOBC.
	<input type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: J

MEMBER: 1

J.1.10 ADDITIONAL COMMENTS SHEET:

FAMILY: J

MEMBER: 2

J	<u>FAMILY:</u> TRAINING DEVICES/SIMULATORS	
2	<u>MEMBER:</u> Fire Control Simulator BT-33	
J.2.1	<u>SOURCE/PROPONENT:</u> Directorate of Training Developments (Simulator's Team), USAFAS	
J.2.2	<u>DESCRIPTION:</u> The Swedish-made indoor simulator is for the training of artillery and mortar fire controllers. The BT-33 is an electronic training device capable of projecting various terrain scenes onto a panoramic screen and simulating artillery engagement of targets within those scenes. It can be used to train a group of students on an individual basis and may be easily modified for group interaction. Personnel required include an instructor and system operator. Currently being used to study its training effectiveness. Difficult to transport; available for use only at Ft. Sill with no future export plans.	
J.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	
		<u>COMMENTS</u>
	<u>X Individual</u>	<u>Up to 25 students individually in group training mode.</u>
	<u>X Collective</u>	<u>Feasible if instructor simulates comm net recipient of call or a simulation position is added.</u>



FAMILY: J

MEMBER: 2

J.2.3 TRAINING AND EVALUATION (CONT'D)

J.2.3.1 LEVEL OF TRAINING:

COMMENTS

     Unit Organization & Job Duties

     Tool Applications to Unit  
Job Duties

X Component Procedures

X Task/Situation Practice

X Small-Team

     Larger-Team

     Multi-Unit

     Command Staff Exercise

Initial, adjusting, FFE calls.

Differing terrain, targets,  
weapons.

Feasible if instructor simulates  
comm net recipient of call or  
a simulation position is added.

J.2.3.2 LEVEL OF EVALUATION:

     Module Test

X Lesson Items

Individual placement of bursts by  
student are evaluated by  
instructor.

FAMILY: JMEMBER: 2

J.2.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	
	<u>    </u> Written	
	<u>X</u> Hands-On	Uses equipment to call for indirect fire, observe impact of bursts
	<u>    </u> Performance Certification	
	<u>X</u> Team Exercise/ARTEP:	
	Positions or echelons interacting:	FO/FDC, FO/Batteries. Requires comm net be established or simulator position added.
J.2.4	<u>CAPABILITIES:</u>	
J.2.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>    </u> Alphanumeric	
	<u>X</u> Special Symbolology	Ground and air bursts, smoke, shrapnel dispersion.
	<u>    </u> 2-D Graphics	
	<u>X</u> 3-D Graphics	
	<u>X</u> Static Displays	
	<u>X</u> Motion	Enemy target effects.
	<u>X</u> Color	Terrain scene
	b. Auditory	
	<u>X</u> Signals/Tones	Machine-gun fire, firing pieces reports, simulated bursts.
	<u>    </u> Speech	
	c. Tactile	
	<u>    </u> Size/Shape	
	<u>    </u> Positional Cues	

FAMILY: J

MEMBER: 2

J.2.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	___ Choice Selection	_____
	___ Specific Recall	_____
	___ Composed/Created	_____
	b. Performance	
	___ Indication	_____
	___ Manipulation	_____
	___ Read/Interpret	_____
	<u>X</u> Listen/Interpret	_____
	<u>X</u> Voice Composition	<u>Call for fire, adjustments.</u>
	<u>X</u> Situation Evaluation	_____
	<u>X</u> Decide Action	_____
J.2.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	___ Informative	_____
	<u>X</u> Evaluative	<u>Gunnery instructor and bursts.</u>
	<u>X</u> Corrective	_____
	___ Summary	_____
	<u>X</u> Immediate	_____
	___ Delayed	_____
	b. Presentation Control	
	___ Learner	_____
	___ Media	_____
	<u>X</u> Instructor	<u>And operator.</u>

FAMILY: J

MEMBER: 2

J.2.4.3	TRAINING MANAGEMENT (CONT'D)		<u>COMMENTS</u>
	c. Sequencing		
	<u>    </u> Linear		
	<u>    </u> Response Branching		
	<u>    </u> History Branching		
	<u>  X  </u> Repetitive Practice	Playback/replay with tape recorder.	
	d. Recordkeeping		
	<u>  X  </u> Automatic (Temporary Storage)	Tape recorder of voice call	
	<u>    </u> Automatic (Permanent Storage)	for fire.	
	<u>  X  </u> Manual	A grading sheet is maintained	
	<u>    </u> None	by instructor for each student	
		shoot.	
J.2.5	<u>SETTING:</u>		
J.2.5.1	<u>  X  </u> INSTITUTIONAL		
	<u>  X  </u> Service School	USAFAS use only.	
	<u>    </u> Army Training Ctr (ATC)		
	<u>    </u> Div/Post Installation Schools		
J.2.5.2	<u>    </u> UNIT		
	<u>    </u> In-System (Embedded)		
	<u>    </u> Job-Station		
	<u>    </u> Individual Learning Ctr (ILC)		
	<u>    </u> Barracks/Home		
	<u>    </u> Garrison Training Area		
	<u>    </u> Local Training Area		
	<u>    </u> Major Training		
	<u>    </u> National Range		



FAMILY: J  
MEMBER: 2

J.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Large, designated, permanent classroom. Needs 200V., 20 amps</u>
		<u>power source. Projection screen, two terrain view projectors,</u>
		<u>target projector, two or three burst projectors and main control</u>
		<u>unit.</u>
J.2.6	EXPORTABILITY:	
	<u>    In Units    </u> <u>    Planning    </u> <input checked="" type="checkbox"/> <u>    No    </u> <u>    Not easily transportable.    </u>	
		<u>    USAFAS use only.    </u>
J.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u>At USAFAS. No plans to export. Not</u>
	<u>    Future Date    </u>	<u>easily transportable.</u>
	<u>    Unknown    </u>	<u>                                    </u>
J.2.6.2	METHOD:	
	<u>    Mail/Ship    </u>	<u>                                    </u>
	<input checked="" type="checkbox"/> Install	<u>                                    </u>
	<u>    Remote Access (Telecommunications)    </u>	<u>                                    </u>
	<u>    In System    </u>	<u>                                    </u>
	<u>    Job Materials    </u>	<u>                                    </u>
J.2.6.3	BASIS OF ISSUE:	
	<u>    On Demand    </u>	<u>                                    </u>
	<u>    Unit Issue    </u>	<u>                                    </u>
J.2.6.4	SOURCE:	
	<u>    Known    </u>	<u>                                    </u>
	<u>    Probable    </u>	<u>                                    </u>
	<u>    Unknown    </u>	<u>                                    </u>

FAMILY: J

MEMBER: 2

J.2.7	<u>SUPPORT REQUIREMENTS:</u>	
J.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>Storage Areas</u>	
	<u>X Spare Parts</u>	<u>Lamps, drive belts, slides.</u>
	<u>Additional Copies On Hand</u>	
	<u>Expendable Material</u>	
J.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X Yes</u> <u>No</u>	
	<u>Operator</u>	
	<u>X Organizational Maintenance</u>	<u>Gunnery operators.</u>
	<u>Direct Support Maintenance</u>	
	<u>General Support Maintenance</u>	
	<u>X Depot Maintenance</u>	<u>Includes DS/GS by contractor.</u>
J.2.7.3	<u>MANNING REQUIREMENTS: Total = 2</u>	
	<u>X System Operators</u>	<u>One.</u>
	<u>X Instructors/Facilitators</u>	<u>One.</u>
	<u>Simulation/Monitor Positions</u>	
	<u>Support Personnel</u>	
J.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>Special Personnel Skills</u>	
	<u>Special Equipment</u>	
	<u>Facility</u>	
	<u>Reproduction</u>	
	<u>Update</u>	

FAMILY: JMEMBER: 2

J.2.8	<u>COST DATA:</u>	<u>COMMENTS</u>
J.2.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	\$120K
	<input type="checkbox"/> None	
J.2.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.2.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	\$10,400 per year.
	<input type="checkbox"/> None	
J.2.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.2.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	13E
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input checked="" type="checkbox"/> Training	Indirect fire methods.
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY: J

MEMBER: 2

J.2.10 ADDITIONAL COMMENTS SHEET:



FAMILY: J  
 MEMBER: 3

J	<u>FAMILY:</u> TRAINING DEVICES/SIMULATORS									
3	<u>MEMBER:</u> Observed Fire Trainer (OFT)									
J.3.1	<u>SOURCE/PROPONENT:</u> Director, Training Developments, USAFAS.									
J.3.2	<u>DESCRIPTION:</u> OFT is a lightweight, self-contained, portable training device that can be used to provide a realistic, economical means of training artillery and maneuver personnel in the adjustment of indirect artillery and mortar fire, as well as supplement training in map reading, survey, and sound adjustment. Training the individual in groups of 14, it includes a life-size terrain scene along with targets and smoke, both stationary and mobile. Student calls for fire are recorded for playback. Immediate corrective feedback is provided by the bursts. Personnel required include one instructor and one maintenance man. To be available to Divisions and Units in 1980.									
J.3.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0"> <tr> <td style="vertical-align: top;"><u>X</u> Individual</td> <td><u>Up to 14 students individually, in group training mode.</u></td> </tr> <tr> <td colspan="2"><hr/></td> </tr> <tr> <td style="vertical-align: top;"><u>X</u> Collective</td> <td><u>Appears feasible, if instructor simulates comm net. Recipient of call or a simulation position is added.</u></td> </tr> <tr> <td colspan="2"><hr/></td> </tr> </table>		<u>X</u> Individual	<u>Up to 14 students individually, in group training mode.</u>	<hr/>		<u>X</u> Collective	<u>Appears feasible, if instructor simulates comm net. Recipient of call or a simulation position is added.</u>	<hr/>	
<u>X</u> Individual	<u>Up to 14 students individually, in group training mode.</u>									
<hr/>										
<u>X</u> Collective	<u>Appears feasible, if instructor simulates comm net. Recipient of call or a simulation position is added.</u>									
<hr/>										

FAMILY: J

MEMBER: 3

J.3.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
J.3.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	_____
		_____
		_____
	<input type="checkbox"/> Tool Applications to Unit Job Duties	_____
		_____
	<input checked="" type="checkbox"/> Component Procedures	<u>Initial, adjusting, FFE calls.</u>
		_____
	<input checked="" type="checkbox"/> Task/Situation Practice	<u>Differing terrain, targets, weapons.</u>
		_____
	<input checked="" type="checkbox"/> Small-Team	<u>If instructor simulates comm net.</u>
		<u>Recipient of call or a simulation</u>
	<input type="checkbox"/> Larger-Team	<u>position is added.</u>
		_____
		_____
	<input type="checkbox"/> Multi-Unit	_____
		_____
	<input type="checkbox"/> Command Staff Exercise	_____
		_____
J.3.3.2	LEVEL OF EVALUATION:	
	<input type="checkbox"/> Module Test	<u>Instructor can provide evaluation</u>
		<u>of burst placement by trainee.</u>
		_____
	<input checked="" type="checkbox"/> Lesson Items	_____
		_____
		_____

FAMILY: J

MEMBER: 3

J.3.3	LEVEL OF EVALUATION (CONT'D)	
	<u>X</u> Individual Performance/SQT	<u>COMMENTS</u>
	<u>    </u> Written	
	<u>X</u> Hands-On	
	<u>X</u> Performance Certification	Unit discretion.
<u>X</u> Team Exercise/ARTEP:		
Positions or echelons		
interacting:	FO/FDC, FO/Batteries.	
J.3.4	<u>CAPABILITIES:</u>	
J.3.4.1	<u>PRESENTATION:</u>	
a. Visual		
<u>    </u> Alphanumeric		
<u>    </u> Special Symbology		
<u>    </u> 2-D Graphics		
<u>X</u> 3-D Graphics	Terrain scene.	
<u>    </u> Static Displays		
<u>X</u> Motion	Targets, shell bursts, smoke.	
<u>X</u> Color	Terrain scene.	
b. Auditory		
<u>X</u> Signals/Tones	Sound of shell burst(s).	
<u>    </u> Speech		
c. Tactile		
<u>    </u> Size/Shape		
<u>    </u> Positional Cues		

FAMILY: J

MEMBER: 3

J.3.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>    </u> Choice Selection	
	<u>    </u> Specific Recall	<u>Procedures, SOPs.</u>
	<u>    </u> Composed/Created	<u>Call for Fire messages.</u>
	b. Performance	
	<u>    </u> Indication	
	<u>    </u> Manipulation	
	<u>    </u> Read/Interpret	
	<u>X</u> Listen/Interpret	
	<u>X</u> Voice Composition	<u>Initial, adjustment, and FFE calls.</u>
	<u>X</u> Situation Evaluation	
	<u>X</u> Decide Action	
	J.3.4.3 TRAINING MANAGEMENT:	
	a. Feedback	
	<u>    </u> Informative	
	<u>X</u> Evaluative	<u>Depends on instructor.</u>
	<u>X</u> Corrective	<u>From burst.</u>
	<u>    </u> Summary	
	<u>X</u> Immediate	<u>From burst.</u>
	<u>X</u> Delayed	<u>From instructor.</u>
	b. Presentation Control	
	<u>    </u> Learner	
	<u>    </u> Media	
	<u>X</u> Instructor	<u>Hold/replay bursts.</u>



FAMILY: J  
 MEMBER: 3

J.3.4.3	TRAINING MANAGEMENT (CONT'D)		<u>COMMENTS</u>
	c. Sequencing		
	<u>    </u> Linear		
	<u>    </u> Response Branching		
	<u>    </u> History Branching		
	<u>  X  </u> Repetitive Practice	Initial, adjust, and FFE calls.	
	d. Recordkeeping		
	<u>  X  </u> Automatic (Temporary Storage)	CRT readout.	
	<u>  X  </u> Automatic (Permanent Storage)	Audio cassette.	
	<u>  X  </u> Manual	Instructor grades.	
	<u>    </u> None		
J.3.5	<u>SETTING:</u>		
J.3.5.1	<u>  X  </u> INSTITUTIONAL		
	<u>  X  </u> Service School	See J.3.5.3.	
	<u>  X  </u> Army Training Ctr (ATC)		
	<u>  X  </u> Div/Post Installation Schools		
J.3.5.2	<u>    </u> UNIT		
	<u>    </u> In-System (Embedded)		
	<u>    </u> Job-Station		
	<u>    </u> Individual Learning Ctr (ILC)		
	<u>    </u> Barracks/Home		
	<u>  X  </u> Garrison Training Area	See J.3.5.3.	
	<u>    </u> Local Training Area	See J.3.5.3.	
	<u>    </u> Major Training		
	<u>    </u> National Range		

FAMILY: J

MEMBER: 3

J.3.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>26' x 17' x 19' ceiling (standard U.S. Military Classroom);</u>
		<u>230 Volts, 50/60 Hz power.</u>
J.3.6	<u>EXPORTABILITY:</u>	
	<u>    In Units</u>	<u>    X Planning</u>
	<u>    No</u>	
J.3.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>    Currently Available</u>	
	<input checked="" type="checkbox"/> Future Date	<u>1980</u>
	<u>    Unknown</u>	
J.3.6.2	METHOD:	
	<u>    Mail/Ship</u>	
	<input checked="" type="checkbox"/> Install	
	<u>    Remote Access (Telecommunications)</u>	
	<u>    In System</u>	
	<u>    Job Materials</u>	
J.3.6.3	BASIS OF ISSUE:	
	<u>    On Demand</u>	
	<input checked="" type="checkbox"/> Unit Issue	<u>Exact BOIP unknown.</u>
J.3.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Director, Trng. Development</u>
	<input checked="" type="checkbox"/> Probable	<u>(Simulator's Team), USAFAS</u>
	<u>    Unknown</u>	<u>PM TRADE/NTEC</u>

FAMILY: J  
MEMBER: 3

J.3.7	<u>SUPPORT REQUIREMENTS:</u>	
J.3.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>Storage Areas</u>	
	<u>X</u> <u>Spare Parts</u>	<u>Kept at organizational DS/GS level.</u>
	<u>Additional Copies On Hand</u>	
	<u>X</u> <u>Expendable Material</u>	<u>Gunnery instructional material.</u>
J.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> <u>Yes</u> <u>No</u>	
	<u>X</u> <u>Operator</u>	<u>Preventative maintenance/equip. checks.</u>
	<u>X</u> <u>Organizational Maintenance</u>	<u>Operator</u>
	<u>X</u> <u>Direct Support Maintenance</u>	<u>Fixed maintenance.</u>
	<u>X</u> <u>General Support Maintenance</u>	<u>Fixed maintenance.</u>
	<u>X</u> <u>Depot Maintenance</u>	<u>Contractor</u>
J.3.7.3	<u>MANNING REQUIREMENTS: Total = <u>2</u></u>	
	<u>X</u> <u>System Operators</u>	<u>One instructor serves also as operator</u>
	<u>X</u> <u>Instructors/Facilitators</u>	<u>and monitor.</u>
	<u>X</u> <u>Simulation/Monitor Positions</u>	
	<u>X</u> <u>Support Personnel</u>	<u>One for DS/GS maintenance.</u>
J.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> <u>Special Personnel Skills</u>	<u>Instructor 13A.</u>
	<u>Special Equipment</u>	
	<u>Facility</u>	
	<u>Reproduction</u>	
	<u>Update</u>	

FAMILY: JMEMBER: 3

J.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
J.3.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	70K
	<input type="checkbox"/> None	
J.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
J.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
J.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	MOS 13E, NCO skill/grade or higher.
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input checked="" type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	



FAMILY: J

MEMBER: 3

J.3.10 ADDITIONAL COMMENTS SHEET:

FAMILY: J  
MEMBER: 4

J	<u>FAMILY:</u> TRAINING DEVICES/SIMULATORS	
4	<u>MEMBER:</u> Artillery Direct Fire Trainer (ADFT)	
J.4.1	<u>SOURCE/PROPONENT:</u> Directorate of Training Developments (Simulator's Team), USAFAS	
J.4.2	ADFT kit: US Army Training Support Center, Ft. Eustis, VA	
J.4.2	<u>DESCRIPTION:</u> The ADFT is an adaptation of the Laser Tank Gunnery Trainer M55. The ADFT is a helium neon gas laser that is attached to the top of 105 and 155 MM howitzer tubes through the use of a clamp. The device has lead and elevation compensating controls and is activated by an electrical "lanyard". The gun crew can, by using proper direct fire procedures, get a "hit" (bright red dot) on the retroflective target included in the ADFT kit. The target itself and the ranges and speeds utilized with the ADFT are one-tenth scale. Used for "hands-on" training, both the individual and the section can be exercised. Training is controlled by the student but observed by an instructor. The kit and the M55 laser (sent separately) were first distributed to battalions in the fourth quarter of FY77.	
J.4.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>  <div style="text-align: right;"><u>COMMENTS</u></div> <div> <u>X</u> Individual    <u>Can be operated by an individual.</u>  <hr/> <hr/> </div> <div> <u>X</u> Collective    <u>Used in conjunction with total section training.</u>  <hr/> <hr/> </div>	

FAMILY: J

MEMBER: 4

J.4.3 TRAINING AND EVALUATION (CONT'D)

J.4.3.1 LEVEL OF TRAINING:

COMMENTS

     Unit Organization & Job Duties

X Tool Applications to Unit  
Job Duties

     Component Procedures

     Task/Situation Practice

X Small-Team

Train 105 and 155 MM howitzer  
gun crew.

     Larger-Team

     Multi-Unit

     Command Staff Exercise

J.4.3.2 LEVEL OF EVALUATION:

     Module Test

X Lesson Items

Burst placement on retroflective  
target. Evaluation by instructor.

FAMILY: J

MEMBER: 4

J.4.3	<p>LEVEL OF EVALUATION (CONT'D)</p> <p style="text-align: right;"><u>COMMENTS</u></p>
	<p><u>X</u> Individual Performance/SQT</p> <p>_____ Written</p> <p><u>X</u> Hands-On      <u>Develop direct fire skills using</u> <u>ADFT on stationary or moving targets.</u></p> <p>_____ Performance Certification</p> <p><u>X</u> Team Exercise/ARTEP:</p> <p>     Positions or echelons      interacting:      <u>Gunner, assistant gunner, Chief of</u>    <u>section.</u></p>
J.4.4	<p><u>CAPABILITIES:</u></p>
J.4.4.1	<p><u>PRESENTATION:</u></p>
	<p>a. Visual</p> <p>_____ Alphanumeric</p> <p>_____ Special Symbology</p> <p>_____ 2-D Graphics</p> <p>_____ 3-D Graphics</p> <p><u>X</u> Static Displays      <u>Retroreflective target.</u></p> <p><u>X</u> Motion      <u>Target pulled in a trainer.</u></p> <p><u>X</u> Color      <u>Bright red dot representing a "hit".</u></p> <p>b. Auditory</p> <p>_____ Signals/Tones</p> <p>_____ Speech</p> <p>c. Tactile</p> <p><u>X</u> Size/Shape</p> <p><u>X</u> Positional Cues</p>





FAMILY: JMEMBER: 4

## J.4.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

## c. Sequencing

☐ Linear \_\_\_\_\_  
☐ Response Branching \_\_\_\_\_  
☐ History Branching \_\_\_\_\_  
☒ Repetitive Practice Until target is hit.

## d. Recordkeeping

☐ Automatic (Temporary Storage) \_\_\_\_\_  
☐ Automatic (Permanent Storage) \_\_\_\_\_  
☒ Manual By the ADFT instructor option  
☒ None system.

J.4.5 SETTING:J.4.5.1 ☒ INSTITUTIONAL

☒ Service School \_\_\_\_\_  
☐ Army Training Ctr (ATC) \_\_\_\_\_  
☐ Div/Post Installation  
Schools \_\_\_\_\_

J.4.5.2 ☒ UNIT

☐ In-System (Embedded) \_\_\_\_\_  
☐ Job-Station \_\_\_\_\_  
☐ Individual Learning Ctr (ILC) \_\_\_\_\_  
☐ Barracks/Home \_\_\_\_\_  
☒ Garrison Training Area \_\_\_\_\_  
☒ Local Training Area \_\_\_\_\_  
☒ Major Training \_\_\_\_\_  
☐ National Range \_\_\_\_\_

MEMBER: 4

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FAMILY: J

MEMBER: 4

J.4.7	<u>SUPPORT REQUIREMENTS:</u>	
J.4.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>Storage Areas</u>	
	<u>Spare Parts</u>	
	<u>Additional Copies On Hand</u>	
	<u>Expendable Material</u>	
J.4.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>    </u> No	
	<u>X</u> Operator	
	<u>X</u> Organizational Maintenance	
	<u>    </u> Direct Support Maintenance	
	<u>    </u> General Support Maintenance	
	<u>    </u> Depot Maintenance	
J.4.7.3	<u>MANNING REQUIREMENTS: Total =</u> <u>1</u>	
	<u>    </u> System Operators	
	<u>X</u> Instructors/Facilitators <u>One</u>	
	<u>    </u> Simulation/Monitor Positions	
	<u>    </u> Support Personnel	
J.4.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>    </u> Special Personnel Skills	
	<u>    </u> Special Equipment	
	<u>    </u> Facility	
	<u>    </u> Reproduction	
	<u>    </u> Update	



FAMILY: JMEMBER: 4

J.4.8	<u>COST DATA:</u>	<u>COMMENTS</u>
J.4.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	6K per ADFT.
	<input type="checkbox"/> None	
J.4.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
J.4.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
J.4.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.4.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input checked="" type="checkbox"/> None	

FAMILY: J

MEMBER: 4

J.4.10 ADDITIONAL COMMENTS SHEET:

FAMILY: J  
MEMBER: 5

J	<u>FAMILY:</u> TRAINING DEVICES/SIMULATORS													
5	<u>MEMBER:</u> M-31 Field Artillery Trainer													
J.5.1	<u>SOURCE/PROPONENT:</u> Directorate of Trng. Developments (Simulator's Team), USAFAS.													
J.5.2	<u>DESCRIPTION:</u> <p>The M31 is a device that can be attached to a tripod or to the bore of a howitzer and fires a 14.5mm point detonating or air burst projectile. Included with the M31 is a kit containing material for adapting the device for firing from either a tripod or the bore of a howitzer. Also included are graphical equipment and a FADAC tape for the M31. These training kits allow realistic training for fire direction personnel in fire direction procedures, and observed fire training for forward observers, gun crews, survey teams, and maneuver unit leaders. The training is conducted on a 1/10 scaled-down range. This allows the simultaneous training of the entire FA indirect fire team. The FO calls in his mission, the FDC computes data for the guns, and the trainer is fired by the gun crew. The commander is able to train his men on a site that allows him to supervise simultaneously all unit training. This permits all members of the gunnery team to view the entire operation and to understand how each member fits into the "big picture". The M31 is an effective tool for developing teamwork and technical proficiency prior to the expenditure of expensive service ammunition. The M31 lends itself well to mini-exercises or reduced-strength training. Howitzers can be manned safely and efficiently by three men. Single-man FO parties are effective. Reduced manning in the FDC without reduced effectiveness or responsiveness is possible. Effective training for portions of the unit can take place even though large numbers of individuals are</p>													
J.5.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>  <table border="0"> <tr> <td><u>X</u></td> <td>Individual</td> <td>Can be used to train individual procedures or team interactions as follows: FDC personnel in fire direction procedures, observed fire for FO, gun</td> </tr> <tr> <td><u>X</u></td> <td>Collective</td> <td>crews, survey teams and maneuver teams.</td> </tr> <tr> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> </tr> </table>	<u>X</u>	Individual	Can be used to train individual procedures or team interactions as follows: FDC personnel in fire direction procedures, observed fire for FO, gun	<u>X</u>	Collective	crews, survey teams and maneuver teams.							(Continued on next page)  <u>COMMENTS</u>
<u>X</u>	Individual	Can be used to train individual procedures or team interactions as follows: FDC personnel in fire direction procedures, observed fire for FO, gun												
<u>X</u>	Collective	crews, survey teams and maneuver teams.												

FAMILY: J

MEMBER: 5

J.5.2

DESCRIPTION (Cont'd)

elsewhere. (Individual training with the M31 offers more for the observer section than for any other element of the battery.) One M31 kit contains enough M31's to equip one U.S. battery and is issued one kit per battalion.



FAMILY: JMEMBER: 5J.5.3 TRAINING AND EVALUATION (CONT'D)

## J.5.3.1 LEVEL OF TRAINING:

COMMENTS     Unit Organization & Job DutiesX Tool Applications to Unit  
Job Duties105mm, 155mm, 175mm and 8 inch  
howitzers.     Component ProceduresX Task/Situation PracticePermits interaction of gun crews  
and FDC to practice teamwork &  
develop technical procedures in  
fire direction techniques.X Small-Team     Larger-Team     Multi-Unit     Command Staff Exercise

## J.5.3.2 LEVEL OF EVALUATION:

     Module TestPlacement of rounds in relation to  
target. Visually checked by  
student and instructor/supervisory  
personnel.X Lesson Items

FAMILY: J

MEMBER: 5

J.5.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>X</u> Individual Performance/SQT	
	<u>    </u> Written	
	<u>X</u> Hands-On	<u>Use of equipment and procedures.</u>
	<u>    </u> Performance Certification	
	<u>X</u> Team Exercise/ARTEP:	<u>Forward observers, fire direction</u>
	Positions or echelons interacting:	<u>center personnel, gunners, &amp; assistant</u> <u>gunners of an artillery battery.</u>
J.5.4	<u>CAPABILITIES:</u>	
J.5.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>    </u> Alphanumeric	<u>Tabular/graphical firing tables.</u>
	<u>    X</u> Special Symbology	
	<u>    </u> 2-D Graphics	
	<u>    X</u> 3-D Graphics	<u>Miniature targets placed within mini range.</u>
	<u>    X</u> Static Displays	<u>Tripod mounts with sights.</u>
	<u>    X</u> Motion	<u>Impact of bursts.</u>
	<u>    X</u> Color	<u>Targets.</u>
	b. Auditory	
	<u>    X</u> Signals/Tones	
	<u>    X</u> Speech	
	c. Tactile	
	<u>    X</u> Size/Shape	
	<u>    X</u> Positional Cues	

MEMBER: 5

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MEMBER: 5

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FAMILY: J  
MEMBER: 5

J.5.5.3	<u>X</u> REQUIREMENTS:	<u>COMMENTS</u>
		<u>M31 kit for adapting the device to a tripod or the bore of a</u>
		<u>howitzer. Graphical equipment, FADAC tape. Range area.</u>
J.5.6	<u>EXPORTABILITY:</u>	
	<u>X</u> In Units <u>    </u> Planning <u>    </u> No	
J.5.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>X</u> Currently Available	<u>Fourth quarter 77.</u>
	<u>    </u> Future Date	
	<u>    </u> Unknown	
J.5.6.2	METHOD:	
	<u>X</u> Mail/Ship	
	<u>X</u> Install	<u>Mini-range.</u>
	<u>    </u> Remote Access (Telecommunications)	
	<u>    </u> In System	
	<u>    </u> Job Materials	
J.5.6.3	BASIS OF ISSUE:	
	<u>    </u> On Demand	
	<u>X</u> Unit Issue	<u>One kit per battalion.</u>
J.5.6.4	SOURCE:	
	<u>X</u> Known	
	<u>    </u> Probable	
	<u>    </u> Unknown	

FAMILY: JMEMBER: 5

J.5.7	<u>SUPPORT REQUIREMENTS:</u>	
J.5.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	M31 device and targets.
	<input checked="" type="checkbox"/> Spare Parts	Targets for mini-range.
	<input type="checkbox"/> Additional Copies On Hand	
	<input checked="" type="checkbox"/> Expendable Material	Special scale map.
J.5.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input checked="" type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
J.5.7.3	<u>MANNING REQUIREMENTS: Total = 4</u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators	One
	<input checked="" type="checkbox"/> Simulation/Monitor Positions	Gun, FO, FDC Section.
	<input type="checkbox"/> Support Personnel	
J.5.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input type="checkbox"/> Special Personnel Skills	
	<input type="checkbox"/> Special Equipment	
	<input checked="" type="checkbox"/> Facility	Mini-range.
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY: JMEMBER: 5

J.5.8	<u>COST DATA:</u>	<u>COMMENTS</u>
J.5.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	\$1500
	<input type="checkbox"/> None	
J.5.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	\$1.30/round.
	<input type="checkbox"/> None	
J.5.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	\$1.30
	<input type="checkbox"/> None	
J.5.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
J.5.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input checked="" type="checkbox"/> Training	Normal & abbreviated calls for fire &
	<input type="checkbox"/> Other	adjustment procedures plus simulated
	<input type="checkbox"/> None	firing.

FAMILY: J

MEMBER: 5

J.5.10 ADDITIONAL COMMENTS SHEET:



## TACTICAL ENGAGEMENT SIMULATIONS (TES)

Army tactical engagement simulation programs offer combat arms unit commanders an opportunity to provide the situational fidelity lacking in previous collective tactical training programs.

Tactical engagement simulation exercises are characterized by:

- Ops/Intell orders and reports realistic to mission objectives
- Active two-sided free play of opposing forces
- Simulation of lethality of modern weapons
- Simulation of all weapons signatures
- Realistic employment of weapons and tactics
- Realistic combat communications among troops and units
- Objective and realtime casualty assessment
- Immediate feedback on visible results of actions  
(burst, smoke) and of causing or becoming a casualty
- Delayed summary feedback through reconstruction of events and lessons learned during the post-exercise After-Action Review (AAR)

Army-wide implementation is nearing completion for two tactical engagement simulation systems. Squad Combat Operations Exercise, Simulated (SCOPES) is designed to exercise opposing rifle fire teams and squads. Developed by CATB, implementation began Army-wide by USAIS in 1974. Soldiers utilize a telescope mounted on the M16A1 rifle to sight numbers affixed on soldier's helmets. The scope is calibrated to simulate a realistic "hit" probability with live ammunition at the same range. When the soldier can read another soldier's number through his scope, he fires a blank and calls out the number. Exercise controller/observers on opposing fire teams report casualty assessments on a radio net. They inform soldiers who become casualties to remain neutralized until exercise termination.

## TACTICAL ENGAGEMENT SIMULATIONS (TES) (Cont'd)

REALTRAIN (REALism in TRAINing) was developed by ARI in 1974. It expanded SCOPES simulation devices and exercise procedures to permit employment of artillery support, mines, tanks, and antitank weapons among squads of opposing platoons. Forward observers (Fire Support Team) can also participate to call for and adjust indirect fires. REALTRAIN contains capabilities to simulate effects and determine casualties for the M-60 machinegun, hand-grenade, M18A1 Claymore mine, heavy machineguns, tank main guns, LAW, TOW, DRAGON, M16A1 antipersonnel and M-21 anti-tank mines. An extensive controller net is required for effective simulation and casualty assessments. Implementation of REALTRAIN in USAREUR and CONUS Active/RC units continues.

The Multiple Integrated Laser Engagement System (MILES) is being developed and evaluated for fielding in the 1980-83 period. This approach utilizes the REALTRAIN exercise procedures, yet seeks higher fidelity simulation of weapons "effects and more objective, automatic scoring than REALTRAIN through the use of MILES laser technology with related instrumentation. MILES technology consists of a series or family of laser devices, which are being developed for the M16 rifle, the full family of machineguns, the VIPER, DRAGON, and TOW antitank weapons, the main battle tanks (M60A1, A2, A3), and the M551 AR/AAV. Follow on efforts will expand the MILES System into air defense weapons, helicopter air-ground engagement systems, USAF aircraft and munitions, and eventually enemy weapons systems. The prototype packages consist of laser transmitters which simulate the direct fire characteristics of the weapons involved, a laser detector array which detects and decodes incoming laser signals, and hit indicating mechanisms which combine audio and visual signals to convey near misses, hits which are not kills, and kills. Each device is to be lightweight, and of such size and shape that its addition to the base weapon will not affect the normal handling, accuracy, or performance of that weapon. MILES includes a provision for a hierarchy of weapons effects. An infantryman, for example, can "kill" another infantryman with his M16 laser device, but cannot disable a tank. Conversely, a tank can "kill" not only another tank but also TOW crews and infantrymen. The key to this discrimination is distinct pulse codes for each weapon, and discrimination logic in each detector.

FAMILY: K

### MEMBER CHARACTERISTICS TABLE

\*

L = Local training area

M = Major training area

[illegible]

FAMILY: K  
MEMBER: 1

K	<u>FAMILY:</u> TACTICAL ENGAGEMENT SIMULATIONS	
1	<u>MEMBER:</u> SCOPES	
K.1.1	<u>SOURCE/PROPONENT:</u> Originally CATB. Now, TRADOC System Manager-Tactical Engagement Simulations (TSM-TES).	
K.1.2	<u>DESCRIPTION:</u> <p>SCOPES (Squad Combat Operations Exercise, Simulated) was originally designed by CATB to teach movement techniques to rifle fire teams and squads. In SCOPES, a low cost six-powered telescope is attached to each soldier's rifle and two digit numbers are affixed to his helmet. The size of the number (3 inches) and the power of the telescope were chosen to obtain a realistic hit probability. A kill is achieved when a soldier fires a blank round and correctly identifies the number of a member of the opposing force. Controllers with each maneuver element transmit these engagements through a control net within seconds after a target has been engaged. Individuals who have been "hit" are then assessed as casualties. Procedures are developed to objectively determine casualties for the M-60 machine gun, practice hand grenade, and practice M18A1 Claymore mine.</p> <p>Similar concepts were developed for heavy machine guns, the tank main gun, LAW, TOW, DRAGON, M16A1 anti-personnel and M-21 anti-tank mines. These devices and procedures which allow tactical engagement simulation to be conducted with combined arms elements have been implemented throughout the Army under the name REALTRAIN. (See Member 2 of this Family.)</p>	
K.1.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>	<u>COMMENTS</u>
	<u>Individual</u>	_____
		_____
	<u>X Collective</u>	<u>Team/squad level opposing-forces tactical training.</u> <u>Collective training and evaluation involves opposing</u> <u>fire teams and squads. Participants engage targets by discharging</u> <u>weapon system (rifle, grenade, Claymore training ammo), interact over</u> <u>field radio and face-to-face, and can call for indirect fire support.</u> <u>Engagements are evaluated by controller casualty assessment net and</u> <u>After-Action Review.</u>



MEMBER: 1

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FAMILY: K

MEMBER: 1

K.1.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>Individual Performance/SQT</u>	
	<u>Written</u>	
	<u>Hands-On</u>	
	<u>Performance Certification</u>	
	<u>X Team Exercise/ARTEP:</u>	<u>Plans underway to include in ARTEP 71-2.</u>
	Positions or echelons interacting:	<u>Opposing rifle fire teams and squads.</u>
K.1.4	<u>CAPABILITIES:</u>	
K.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	<u>Mission orders, tactical messages &amp; reports.</u>
	<u>X</u> Special Symbolology	<u>Army combat operations symbols.</u>
	<u>X</u> 2-D Graphics	<u>Tactical Ops/Intell maps.</u>
	<u>X</u> 3-D Graphics	<u>Terrain, targets, weapons signatures.</u>
	<u>X</u> Static Displays	<u>Mission order maps, etc. Stationary targets.</u>
	<u>X</u> Motion	<u>Opposing personnel.</u>
	<u>X</u> Color	<u>Realistic terrain, troops, materiel.</u>
	b. Auditory	
	<u>X</u> Signals/Tones	<u>Actual equipment &amp; training practice ammo.</u>
	<u>X</u> Speech	<u>Voice commands, tactical interaction.</u>
	c. Tactile	
	<u>X</u> Size/Shape	<u>Realistic employment and operation of</u>
	<u>X</u> Positional Cues	<u>actual combat weapons.</u>

FAMILY: K  
MEMBER: 1

K.1.4.2	RESPONSE:	COMMENTS
a.	Verbal/Symbolic	
	<u>Choice Selection</u>	
	<u>Specific Recall</u>	<u>Recall of tactics, SOPs, etc., as</u>
	<u>Composed/Created</u>	<u>required to perform combat tasks.</u>
b.	Performance	
	<u>X Indication</u>	<u>Align weapon scope. Aim weapon.</u>
	<u>X Manipulation</u>	<u>Operate weapon and comm gear.</u>
	<u>X Read/Interpret</u>	<u>Mission orders, messages, maps, reports.</u>
	<u>X Listen/Interpret</u>	<u>Voice messages, blank ammo, casualty reports.</u>
	<u>X Voice Composition</u>	<u>Tactical commands, reports, Controller net.</u>
	<u>X Situation Evaluation</u>	<u>Assess movements and status of forces.</u>
	<u>X Decide Action</u>	<u>Deploy and utilize resources.</u>
.4.3	TRAINING MANAGEMENT:	
a.	Feedback	
	<u>Informative</u>	
	<u>X Evaluative</u>	<u>In-exercise orders and commands,</u>
	<u>X Corrective</u>	<u>reported casualty results.</u>
	<u>X Summary</u>	<u>Controller records in After-Action Review.</u>
	<u>X Immediate</u>	<u>Causing or becoming a casualty.</u>
	<u>X Delayed</u>	<u>After-Action Review.</u>
b.	Presentation Control	
	<u>X Learner</u>	<u>Opposing forces free-play per SOP.</u>
	<u>X Media</u>	<u>Scenario mission orders, combat results.</u>
	<u>X Instructor</u>	<u>Pre-exercise/in-exercise controller reports.</u>

FAMILY: KMEMBER: 1

## K.1.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

## c. Sequencing

X Linear Per mission orders.

X Response Branching Opposing forces free-play.

X History Branching Repeat mission per After-Action Review.

X Repetitive Practice As required by duty position during  
mission events. Repeat of same mission

## d. Recordkeeping

Automatic (Temporary Storage) \_\_\_\_\_

Automatic (Permanent Storage) \_\_\_\_\_

X Manual Controller records on targets  
and association of casualties  
with firers.

None \_\_\_\_\_

K.1.5 SETTING:K.1.5.1 INSTITUTIONAL

Service School See K.1.5.3 "Requirements."

Army Training Ctr (ATC) \_\_\_\_\_

Div/Post Installation \_\_\_\_\_  
Schools \_\_\_\_\_

K.1.5.2 X UNIT

In-System (Embedded) \_\_\_\_\_

Job-Station \_\_\_\_\_

Individual Learning Ctr (ILC) \_\_\_\_\_

Barracks/Home \_\_\_\_\_

Garrison Training Area \_\_\_\_\_

X Local Training Area Depends on number of opposing per-  
sonnel and types of weapons.

X Major Training \_\_\_\_\_

National Range \_\_\_\_\_



MEMBER: 1

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FAMILY: KMEMBER: 1

K.1.7	<u>SUPPORT REQUIREMENTS:</u>	
K.1.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	Special equipment and ammo.
	<input type="checkbox"/> Spare Parts	
	<input checked="" type="checkbox"/> Additional Copies On Hand	Training ammo.
	<input type="checkbox"/> Expendable Material	↓
K.1.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<input checked="" type="checkbox"/> Operator	SCOPES equipment
	<input checked="" type="checkbox"/> Organizational Maintenance	↓
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
K.1.7.3	<u>MANNING REQUIREMENTS: Total = 3 minimum</u>	
	<input type="checkbox"/> System Operators	
	<input type="checkbox"/> Instructors/Facilitators	
	<input checked="" type="checkbox"/> Simulation/Monitor Positions	Three controllers for one squad
	<input type="checkbox"/> Support Personnel	exercise, one controller per fire
K.1.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	team.
	<input checked="" type="checkbox"/> Special Personnel Skills	Develop mission scenarios and train
	<input type="checkbox"/> Special Equipment	controllers, if not done in units.
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

MEMBER: 1

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FAMILY:           K            
MEMBER:           1          

K.1.10 ADDITIONAL COMMENTS SHEET:



FAMILY: K  
MEMBER: 2

K	<u>FAMILY:</u> TACTICAL ENGAGEMENT SIMULATIONS					
2	<u>MEMBER:</u> REALTRAIN (Exercise for Combined Arms Elements)					
K.2.1	<u>SOURCE/PROponent:</u> CATB Ft. Benning/ATB, Ft. Eustis. TRADOC System Manager, Tactical Engagement Simulations (TSM-TES).					
K.2.2	<p><u>DESCRIPTION:</u> REALTRAIN (<u>REAL</u>ism in <u>TRAIN</u>ing) is a training method developed for tactical opposing-forces field exercises involving small units from crew/fire team to reinforced platoon levels. Each opposing force may be as large as two platoons. Exercises can integrate armor, infantry antiarmor, and artillery teams. Participants, equipment, and controllers are from unit organic resources.</p> <p>REALTRAIN emphasizes the realistic lethality of modern weapons in combat tactical situations. Equipment includes actual weapons, simulators, and communications gear IAW type of participating units (see TC 71-5). Optical devices, telescopes or plastic sighting plates are mounted in weapons of the opposing small-unit forces, aligned with weapon sights. Weapons signature simulators (training ammo, explosives, pyrotechnics) are used to simulate antitank, tank main gun, and artillery fire missions.</p> <p>Any indirect fire weapon can be simulated (artillery, mortar) by cooperation between two Sr. Controllers and the Indirect Fire Controller who moves throughout the problem area detonating artillery and mortar simulators to carry out fire calls and adjustments made by participating FOs or fire team leaders. Smoke missions may be employed using grenades (HC) in adjusting fires, and smoke pots for FFE.</p> <p>REALTRAIN incorporates a believable casualty assessment system, based upon crew and weapons capabilities. Controllers, who may be part of the training (not removed) make casualty assessments IAW rules of</p>					
K.2.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u> (Continued on next page)</p> <p style="text-align: center;"><u>COMMENTS</u></p> <table border="0"> <tr> <td style="vertical-align: top;"><u>X</u> Individual</td> <td><u>Only through adequate After-Action Review of individual contributions to successful/unsuccessful missions.</u></td> </tr> <tr> <td style="vertical-align: top;"><u>X</u> Collective</td> <td><u>Opposing forces of single branch or combined arms tank, mech Inf, and antiarmor elements including direct/indirect fire teams and Arty effects simulation.</u></td> </tr> </table> <p style="text-align: right;">(Continued on next page)</p>		<u>X</u> Individual	<u>Only through adequate After-Action Review of individual contributions to successful/unsuccessful missions.</u>	<u>X</u> Collective	<u>Opposing forces of single branch or combined arms tank, mech Inf, and antiarmor elements including direct/indirect fire teams and Arty effects simulation.</u>
<u>X</u> Individual	<u>Only through adequate After-Action Review of individual contributions to successful/unsuccessful missions.</u>					
<u>X</u> Collective	<u>Opposing forces of single branch or combined arms tank, mech Inf, and antiarmor elements including direct/indirect fire teams and Arty effects simulation.</u>					

K.2.2	<p><u>DESCRIPTION: (Cont'd)</u></p> <p>engagement by weapon type for direct and indirect-fire weapons. The "hits" and "misses" are reported on a casualty assessment voice net. Engagement results during exercise are immediately and objectively visible to gunners.</p> <p>A post-mission After-Action Review (AAR), guided by a Sr. Controller, focuses on the chronology of engagements/casualties, and encourages soldier self-reports on lessons learned when engaging or "killed". This AAR is based on a manual recordkeeping system.</p> <p>Controller selection and competence is critical to weapons effects verification, casualty assessment, weapons effects simulation, ensuring safety, and evaluating unit readiness or training needs.</p> <p>REALTRAIN has been exported to USAREUR and CONUS units for use in local and major training areas. Evaluation data on unit effectiveness and soldier acceptance comparisons with normal FTX and other tactical collective training methods has been very favorable.</p>
K.2.3	<p><u>TRAINING AND EVALUATION APPLICATIONS: (Cont'd)</u></p> <p><u>X</u> Collective (continued)</p> <p>Collective training and evaluation can range from opposing section/squads up to opposing combined arms platoons, depending on unit CDR's readiness exercise requirements. Participants interact by voice radio/phone over Tactical Comm Net, Controllers over Control and Casualty Assessment Net.</p>

FAMILY: K  
 MEMBER: 2

K.2.3	<u>TRAINING AND EVALUATION</u> (CONT'D)	
K.2.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	_____
		_____
		_____
	<input type="checkbox"/> Tool Applications to Unit Job Duties	_____
		_____
	<input type="checkbox"/> Component Procedures	_____
		_____
	<input checked="" type="checkbox"/> Task/Situation Practice	Individual duties in unit
		mission situations.
	<input checked="" type="checkbox"/> Small-Team	_____
		_____
	<input checked="" type="checkbox"/> Larger-Team	Reinforced platoon combined arms
		tactical training.
	<input checked="" type="checkbox"/> Multi-Unit	↓
		_____
		_____
	<input type="checkbox"/> Command Staff Exercise	_____
		_____
K.2.3.2	LEVEL OF EVALUATION:	
	<input type="checkbox"/> Module Test	_____
		_____
		_____
	<input type="checkbox"/> Lesson Items	_____
		_____
		_____

FAMILY: K

MEMBER: 2

K.2.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>Individual Performance/SQT</u>	
	<u>Written</u>	
	<u>Hands-On</u>	
	<u>Performance Certification</u>	
	<u>X Team Exercise/ARTEP:</u>	<u>Plans underway to include in</u>
	<u>Positions or echelons</u>	<u>ARTEP 71-2.</u>
	<u>interacting:</u>	<u>Opposing sections/squads up to</u>
		<u>opposing combined arms platoons.</u>
K.2.4	<u>CAPABILITIES:</u>	
K.2.4.1	<u>PRESENTATION:</u>	
	<u>a. Visual</u>	
	<u>X Alphanumeric</u>	<u>Mission orders, tactical messages and reports.</u>
	<u>X Special Symbolology</u>	<u>Army combat operations symbols.</u>
	<u>X 2-D Graphics</u>	<u>Tactical Ops/Intell maps.</u>
	<u>X 3-D Graphics</u>	<u>Terrain, targets, weapon signatures, smoke.</u>
	<u>X Static Displays</u>	<u>Mission orders, maps, etc. Stationary targets.</u>
	<u>X Motion</u>	<u>Opposing vehicles and personnel.</u>
	<u>X Color</u>	<u>Realistic terrain, troops, materiel.</u>
	<u>b. Auditory</u>	
	<u>X Signals/Tones</u>	<u>Actual equipment, practice ammo, explosives.</u>
	<u>X Speech</u>	<u>Voice fire direction, tactical interaction, commands.</u>
	<u>c. Tactile</u>	
	<u>X Size/Shape</u>	<u>Realistic employment and operation of actual</u>
	<u>X Positional Cues</u>	<u>combat equipment and weapons.</u>



MEMBER: 2

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MEMBER: 2

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FAMILY: K  
MEMBER: 2

K.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u> Sufficient for realistic mission deployment and maneuver of opposing armor, mech Inf, and other elements considering explosives detonation, controller movements, and safety. Example: area 1-2
K.2.6	<u>EXPORTABILITY:</u>	(Continued on next page)
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	<u>USAREUR and CONUS.</u>
K.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	<u>Selected USAREUR/FORSCOM 1974-75.</u>
	<input checked="" type="checkbox"/> Currently Available	<u>USAREUR units 1975-76.</u>
	<input type="checkbox"/> Future Date	<u>CONUS Active Bns and selected RC units,</u>
	<input type="checkbox"/> Unknown	<u>1976-77.</u>
K.2.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	<u>TC 71-5 and equipment.</u>
	<input checked="" type="checkbox"/> Install	<u>Weapon-specific equipment.</u>
	<input type="checkbox"/> Remote Access (Telecommunications)	<u></u>
	<input checked="" type="checkbox"/> In System	<u>Tank and other specific equipment.</u>
	<input checked="" type="checkbox"/> Job Materials	<u>Actual combat materiel. Controller commu-</u>
K.2.6.3	BASIS OF ISSUE:	<u>nication net, vehicles. Training ammo</u>
	<input type="checkbox"/> On Demand	<u>and pyrotechnics.</u>
	<input checked="" type="checkbox"/> Unit Issue	<u>15 sets equip./tank Bn, 10 sets TOW equip./</u>
K.2.6.4	SOURCE:	<u>Inf Bn, SCOPES existing equip. issue to</u>
	<input checked="" type="checkbox"/> Known	<u>MTT rifle units.</u>
	<input type="checkbox"/> Probable	<u></u>
	<input type="checkbox"/> Unknown	<u></u>

FAMILY:   K  

MEMBER:   3  

K.2.5.3 REQUIREMENTS: (Cont'd)

KM width and 3-5 KM long for mech Inf squad and Inf Co TOW section  
defending objective against tank platoon and mech platoon.



FAMILY: K  
MEMBER: 2

K.2.7	<u>SUPPORT REQUIREMENTS:</u>	
K.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>X</u> Storage Areas	<u>Special equipment and training ammo.</u>
	<u>  </u> Spare Parts	<u> </u>
	<u>X</u> Additional Copies On Hand	<u>Training ammo &amp; simulators.</u>
	<u>X</u> Expendable Material	<u>↓</u>
K.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>  </u> No	<u> </u>
	<u>X</u> Operator	<u>REALTRAIN equipment.</u>
	<u>X</u> Organizational Maintenance	<u>↓</u>
	<u>  </u> Direct Support Maintenance	<u> </u>
	<u>  </u> General Support Maintenance	<u> </u>
	<u>  </u> Depot Maintenance	<u> </u>
K.2.7.3	<u>MANNING REQUIREMENTS: Total = 3 minimum, 1 Senior and one for each</u>	
	<u>  </u> System Operators	<u>opposing team. Depends on systems and</u>
	<u>  </u> Instructors/Facilitators	<u>units participating.</u>
	<u>X</u> Simulation/Monitor Positions	<u>One controller for every major</u>
	<u>  </u> Support Personnel	<u>weapons system (tank, TOW, 106 mm, etc.) One</u>
K.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT: for every Inf fire team participating.</u>	
	<u>X</u> Special Personnel Skills	<u>Develop mission scenarios and train</u>
	<u>  </u> Special Equipment	<u>controllers, if not done in units.</u>
	<u>  </u> Facility	<u> </u>
	<u>  </u> Reproduction	<u> </u>
	<u>  </u> Update	<u> </u>

MEMBER: 2

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FAMILY:     K    

MEMBER:     2    

K.2.10	<u>ADDITIONAL COMMENTS SHEET:</u>
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FAMILY: K  
MEMBER: 3

K	<u>FAMILY:</u> TACTICAL ENGAGEMENT SIMULATIONS									
3	<u>MEMBER:</u> MILES									
K.3.1	<u>SOURCE/PROPONENT:</u> TRADOC System Manager - Tactical Engagement Simulations (TSM-TES). PM TRADE, Orlando, Fla. Xerox Corporation, MILES Program, Pasadena. CA.									
K.3.2	<u>DESCRIPTION:</u> <p>The <u>M</u>ultiple <u>I</u>ntegrated <u>L</u>aser <u>E</u>ngagement <u>S</u>ystem (MILES) Program is designed to provide greater fidelity to tactical engagement simulations, and to extend these exercises to full company and battalion task force levels of training to include night operations. The MILES technology consists of a family of low power, eye safe lasers which will simulate the direct fire characteristics of the M16A1 rifle, the M60, M2 and M85 machine gun, the VIPER, DRAGON, TOW and Shillelagh missile systems plus the 105 and 152mm tank main guns. Firing is realistic with sound and smoke from subcaliber ammo. The TOW will use a special optic device to permit firing with wire guide. Laser detection equipment mounted on individuals and vehicles will discriminate both kill and near-miss beams (suppressive fire) to provide immediate and accurate casualty assessment in two-sided, free play tactical exercises. A hierarchy of weapons effects is established within the detector logic which realistically controls the lethality of the weapons involved. For example, a tank main gun can "destroy" an APC, but an M16A1 rifle cannot.</p> <p>Scoring is semi-automatic in MILES, requiring fewer controllers than REALTRAIN. When a target is "hit", a loud alarm mounted on the target (e.g., soldier's helmet) will sound. The individual or crew-served weapon must then be disabled to disable the alarm. Thereafter, the target remains neutralized for the exercise.</p> <p style="text-align: right;">(Continued on next page)</p>									
K.3.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;"><u>Individual</u></td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> <tr> <td><u>X Collective</u></td> <td> <u>Full company team to battalion task force opposing-</u>  <u>forces tactical training. Integration of MILES</u>  <u>laser instrumentation with REALTRAIN experiential tactical</u>  <u>engagement simulation procedures (see K.2 &amp; Family K descriptions).</u> </td> </tr> </table>		<u>Individual</u>	_____		_____		_____	<u>X Collective</u>	<u>Full company team to battalion task force opposing-</u> <u>forces tactical training. Integration of MILES</u> <u>laser instrumentation with REALTRAIN experiential tactical</u> <u>engagement simulation procedures (see K.2 &amp; Family K descriptions).</u>
<u>Individual</u>	_____									
	_____									
	_____									
<u>X Collective</u>	<u>Full company team to battalion task force opposing-</u> <u>forces tactical training. Integration of MILES</u> <u>laser instrumentation with REALTRAIN experiential tactical</u> <u>engagement simulation procedures (see K.2 &amp; Family K descriptions).</u>									



FAMILY:   K  

MEMBER:   3  

K.3.2 DESCRIPTION: (Cont'd)

Current work is on line-of-sight, direct fire weapons; especially M16 rifle and M60. Pending success of rifle and machine gun OT-II in 1978, DA may then decide to extend MILES instrumentation to the LAW, DRAGON, TOW, Shillelagh, and Field Arty pieces in the 78-83 period. Initial production and unit issues are expected to begin 1979-80.

MILES will also provide realistic training to the logistical and administrative elements of the units, since M16 rifle and M60 MG laser "firings" are keyed or enabled only the discharge of a blank round. For anti-tank weapons and the tank main gun the number of laser firings will be limited by system design to the basic load normally carried by the respective weapon or vehicle. Thus, ammunition expenditure and resupply will require the full resources of the logisticians. Additionally, the objective and realtime casualty assessment capabilities will allow for the full participation and functioning of the medical and individual replacement systems.

FAMILY: K  
MEMBER: 3

K.3.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
K.3.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<u>Unit Organization &amp; Job Duties</u>	<u></u> <u></u> <u></u>
	<u>Tool Applications to Unit Job Duties</u>	<u></u> <u></u>
	<u>Component Procedures</u>	<u></u> <u></u>
	<u>Task/Situation Practice</u>	<u></u> <u></u>
	<u>Small-Team</u>	<u></u> <u></u>
	<u>X Larger-Team</u>	<u>Company teams to Bn task force size opposing forces.</u>
	<u>X Multi-Unit</u>	<u>Armor, mounted/dismounted Inf, Fire Support Teams, Field Artillery.</u>
	<u>X Command Staff Exercise</u>	<u>Co/Bn CDRs and staff officers for logistics (ammo expenditure &amp; resupply), personnel, medical evacuation (simulated casualties &amp; troop replacements.).</u>
K.3.3.2	LEVEL OF EVALUATION:	
	<u>Module Test</u>	<u></u> <u></u> <u></u>
	<u>Lesson Items</u>	<u></u> <u></u> <u></u>

FAMILY: K

MEMBER: 3

<p>K.3.3.2</p>	<p>LEVEL OF EVALUATION (CONT'D)</p> <p><u>      </u> Individual Performance/SQT</p> <p><u>      </u> Written</p> <p><u>      </u> Hands-On</p> <p><u>  X  </u> Performance Certification    <u>Could be done as part of MILES tactical engagement exercise.</u></p> <p><u>  X  </u> Team Exercise/ARTEP:    <u>Field work underway to integrate MILES/REALTRAIN with ARTEP.</u></p> <p>                                 <u>Positions or echelons interacting:    <u>Opposing combined arms companies, to battalion task force.</u></u></p>
<p>K.3.4</p>	<p><u>CAPABILITIES:</u></p>
<p>K.3.4.1</p>	<p><u>PRESENTATION:</u></p> <p>a. Visual</p> <p><u>  X  </u> Alphanumeric    <u>Orders, messages, maps, reports.</u></p> <p><u>  X  </u> Special Symbology    <u>Army combat operations symbols.</u></p> <p><u>  X  </u> 2-D Graphics    <u>Tactical Ops/Intell maps.</u></p> <p><u>  X  </u> 3-D Graphics    <u>Terrain, targets, weapons signatures.</u></p> <p><u>  X  </u> Static Displays    <u>Orders, maps, etc. Stationary targets.</u></p> <p><u>  X  </u> Motion    <u>Vehicles, troops, moving targets.</u></p> <p><u>  X  </u> Color    <u>Realistic terrain, troops, material.</u></p> <p>b. Auditory</p> <p><u>  X  </u> Signals/Tones    <u>Actual equipment, subcaliber burst, explosives.</u></p> <p><u>  X  </u> Speech    <u>Voice commands, tactical interactions.</u></p> <p>c. Tactile</p> <p><u>  X  </u> Size/Shape    <u>Realistic operation and employment of</u></p> <p><u>  X  </u> Positional Cues    <u>actual weapons and vehicles.</u></p>

FAMILY: K  
MEMBER: 3

K.3.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	___ Choice Selection	
	___ Specific Recall	<u>Recall of tactics, SOPs, etc., as re-</u>
	___ Composed/Created	<u>quired to perform combat tasks.</u>
	b. Performance	
	<u>X</u> Indication	<u>Aim weapons with laser devices.</u>
	<u>X</u> Manipulation	<u>Operate weapons, vehicles, comm gear.</u>
	<u>X</u> Read/Interpret	<u>Mission orders, messages, maps, reports.</u>
	<u>X</u> Listen/Interpret	<u>Voice messages, subcaliber ammo, reports.</u>
	<u>X</u> Voice Composition	<u>Tactical commands, rpts, Controller net.</u>
	<u>X</u> Situation Evaluation	<u>Assess movements and status of forces.</u>
	<u>X</u> Decide Action	<u>Deploy and utilize resources.</u>
K.3.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	___ Informative	
	<u>X</u> Evaluative	<u>Exercise orders and commands, reported</u>
	<u>X</u> Corrective	<u>casualty results.</u>
	<u>X</u> Summary	<u>Controller records in After-Action Review.</u>
	<u>X</u> Immediate	<u>Causing or becoming a casualty.</u>
	<u>X</u> Delayed	<u>After-Action Review.</u>
	b. Presentation Control	
	<u>X</u> Learner	<u>Opposing forces free-play per SOP.</u>
	<u>X</u> Media	<u>Mission orders, combat results.</u>
	<u>X</u> Instructor	<u>Exercise controller reports.</u>



MEMBER: 3

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MEMBER: 3

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FAMILY: KMEMBER: 3

K.3.7	<u>SUPPORT REQUIREMENTS:</u>	
K.3.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>X</u> Storage Areas	<u>MILES equipment, subcaliber ammo.</u>
	<u>X</u> Spare Parts	<u>MILES instrumentation.</u>
	<u>X</u> Additional Copies On Hand	<u>Training ammo, Controller records.</u>
	<u>X</u> Expendable Material	<u>↓</u>
K.3.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X</u> Yes <u>    </u> No	<u>MILES equipment instrumentation.</u>
	<u>X</u> Operator	<u>↓</u>
	<u>X</u> Organizational Maintenance	<u>↓</u>
	<u>    </u> Direct Support Maintenance	<u>    </u>
	<u>    </u> General Support Maintenance	<u>    </u>
	<u>X</u> Depot Maintenance	<u>Contractor support initially.</u>
K.3.7.3	<u>MANNING REQUIREMENTS: Total =</u> <u>Unknown. Depends on size of mission.</u>	
	<u>    </u> System Operators	<u>See K.8.3.1.</u>
	<u>    </u> Instructors/Facilitators	<u>    </u>
	<u>X</u> Simulation/Monitor Positions	<u>Exercise controllers (should require</u>
	<u>    </u> Support Personnel	<u>fewer per weapon or unit element</u>
		<u>than REALTRAIN).</u>
K.3.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X</u> Special Personnel Skills	<u>Develop mission scenarios &amp; train</u>
	<u>    </u> Special Equipment	<u>controllers, if not done in units.</u>
	<u>    </u> Facility	<u>    </u>
	<u>    </u> Reproduction	<u>    </u>
	<u>    </u> Update	<u>    </u>

FAMILY:   K  MEMBER:   3  

K.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
K.3.8.1	SYSTEM ACQUISITION:	
	<input checked="" type="checkbox"/> High <u>Estimated</u>	<u>Unknown. Contact TSM-TES, PM TRADE,</u>
	<input type="checkbox"/> Medium	<u>or Deputy Project Manager, MILES,</u>
	<input type="checkbox"/> Low	<u>Xerox Corp., Pasadena, CA.</u>
	<input type="checkbox"/> None	
K.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input checked="" type="checkbox"/> High <u>Estimated</u>	<u>Unknown. See K.3.8.1.</u>
	<input checked="" type="checkbox"/> Medium	<u>Per Co/Bn level combined arms mission</u>
	<input type="checkbox"/> Low	<u>exercise.</u>
	<input type="checkbox"/> None	
K.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	<u>Unknown. See K.3.8.1.</u>
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low <u>Estimated</u>	<u>MILES instrumentation.</u>
	<input type="checkbox"/> None	
K.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	<u>Unknown. See K.3.8.1.</u>
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low <u>Estimated</u>	<u>Mission scenario, Controller records.</u>
	<input type="checkbox"/> None	
K.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input checked="" type="checkbox"/> MOS Requirements	<u>Combined Arms, all combat MOS levels.</u>
	<input type="checkbox"/> Aptitudes	<u>squad/platoon leaders, Co/Bn CDRs &amp; Staff.</u>
	<input checked="" type="checkbox"/> Schools/Courses	<u>AIT, BNCOC/PNCOC, OBC/OAC, USACGSC.</u>
	<input checked="" type="checkbox"/> Training	<u>Individual &amp; squad/platoon levels.</u>
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	



FAMILY:     K    

MEMBER:     3    

K.3.10	<u>ADDITIONAL COMMENTS SHEET:</u>
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## COMMAND/STAFF BATTLE SIMULATIONS

Command/staff battle simulations are forms of war games by which command and staff personnel can perform tasks, exercise procedures and make decisions as though they were engaged in a tactical situation against opposing forces. The echelon of participants can range from platoon leaders to corps. There are two basic forms. Manual battle simulations and computer supported battle simulations.

Manual battle simulations may be played using paper maps, boards and/or terrain maps. Gaming equipment to include models of friendly and opposing forces may also be included. A scenario is prepared in which friendly and opposing forces are established, logistics specified and rules and regulations for play outlined. The participants are the players (2 or more) and may include players/controllers who function as the opposing forces and monitors/umpires who may be needed to rule on or control specific outcomes of the game. The game play may be open, the commander can see the game board, or closed, the commander reacts to messages as though in a real situation and cannot see the game board. The simulation may be played in a simulated or actual TOC. After action reports and critiques occur at the end of play. Manual battle simulations are currently being prepared for export to the unit level.

Computer supported battle simulations are similiar to manual battle simulations but utilize the power of the computer to maintain status of forces and damage assessments through the use of powerful math models. The echelon of players are usually battalion or higher. Teletype terminals linked to the computer are used by players and controllers in real time to receive messages and to make rapid and realistic judgments on damage assessment and situation changes. Players can participate at wide spread locations through a time-shared network. Digitized terrain and elaborate graphic displays may be used to make the play more realistic through line of sight determination, rate of movement and

COMMAND/STAFF BATTLE SIMULATIONS (Cont'd)

weather effects. The costs for a computer supported battle simulation system is high when compared to manual simulations. Extension of computer supported simulations to unit level is currently in progress.

FAMILY: L

MEMBER CHARACTERISTICS TABLE

MEMBER	Training Method		Training Level	Setting		Available Date	Acquisition & Courseware Costs					Presentation			
	I	C	1 - 8	I	U		High	Med	Low	V	A	T	S		
							5	4	3					2	1
1. Tactical Exercise Without Troops (TEWTS)		X	5		X	Now					X	X	X	X	X
2. CPX Simulation Facility		X	8	X		UNK					X	X	X	X	X
3. CAMMS (Computer Assisted Map Maneuver Sys.)		X	8	X	X	Now		X				X	X		X
4. Combined Arms Tactical Training Simulator (CATTS)		X	8	X	X	1980	X					X	X		X
5. FIREFIGHT		X	8	X	X	Now					X	X			X
6. DUNN KEMPF		X	8	X	X	Now					X	X	X	X	X
7. PEGASUS		X	8	X	X	1978					X	X	X	X	X
8. FIRST BATTLE		X	8	X	X	1978					X	X	X	X	X



FAMILY: L

MEMBER: 1

L	<p><u>FAMILY:</u> COMMAND/STAFF BATTLE SIMULATIONS</p>
1	<p><u>MEMBER:</u> Tactical Exercise Without Troups (TEWTS)</p>
L.1.1	<p><u>SOURCE/PROPONENT:</u> Guidance: FM 21-6, Appendix E</p>
L.1.2	<p><u>DESCRIPTION:</u> A terrain exercise, TEWTS is used for training leaders (from platoon to battalion and above). Leaders plan the maneuver or deployment of simulated troops on a specific piece of ground. They work from an instructor developed scenario. It gets leaders out for terrain analysis, selection of positions, siting of weapons, practice in giving orders, and training through troop leading procedures. Terrain exercises can be conducted on foot or in vehicles. The only real lesson material needed is the scenario used to exercise the leaders in certain learning objectives. Virtually of no cost, only one instructor is required along with a stretch of accessible land. Leaders to be trained vary from platoon to battalion and above.</p>
L.1.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <div style="text-align: right; margin-right: 100px;"><u>COMMENTS</u></div> <p><u>Individual</u> _____</p> <p>_____</p> <p><u>X Collective</u> <u>Group of leaders at different echelons to plan, conduct and supervise to a tactical operation.</u></p> <p>_____</p>

FAMILY: L

MEMBER: 1

L.1.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
L.1.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	
	<input type="checkbox"/> Tool Applications to Unit Job Duties	
	<input type="checkbox"/> Component Procedures	
	<input type="checkbox"/> Task/Situation Practice	
	<input checked="" type="checkbox"/> Small-Team	Leaders at different echelons
		planning maneuvers and
	<input type="checkbox"/> Larger-Team	deployment of simulated troops
	<input type="checkbox"/> Multi-Unit	
	<input type="checkbox"/> Command Staff Exercise	
L.1.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	Results of tactical action and
		decisions are evaluated by
		instructors/evaluators
	<input type="checkbox"/> Lesson Items	

FAMILY: L  
MEMBER: 1

L.1.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<input type="checkbox"/> Individual Performance/SQT	
	<input type="checkbox"/> Written	
	<input type="checkbox"/> Hands-On	
	<input type="checkbox"/> Performance Certification	
	<input checked="" type="checkbox"/> Team Exercise/ARTEP:	Virtually any echelon: Leaders
	Positions or echelons interacting:	from Crew/squad and through battalion/task force and higher
L.1.4	<u>CAPABILITIES:</u>	
L.1.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<input checked="" type="checkbox"/> Alphanumeric	<u>Scenario: General situation (initial situation and requirements), subsequent situations and requirements plus solutions or standards for the leaders. Exercise is conducted on actual terrain either on foot or in vehicles.</u>
	<input checked="" type="checkbox"/> Special Symbology	
	<input type="checkbox"/> 2-D Graphics	
	<input checked="" type="checkbox"/> 3-D Graphics	
	<input type="checkbox"/> Static Displays	
	<input type="checkbox"/> Motion	
	<input type="checkbox"/> Color	
	b. Auditory	
	<input type="checkbox"/> Signals/Tones	
	<input checked="" type="checkbox"/> Speech	<u>Introduction: Purpose of exercise and task.</u>
	c. Tactile	
	<input checked="" type="checkbox"/> Size/Shape	<u>May be on foot or use vehicles within specified terrain.</u>
	<input checked="" type="checkbox"/> Positional Cues	

FAMILY: L

MEMBER: 1

L.1.4.2	RESPONSE:	<u>COMMENTS</u>
	<p>a. Verbal/Symbolic</p> <p><u>    </u> Choice Selection</p> <p><u>    </u> Specific Recall</p> <p><u>    </u> Composed/Created</p> <p>b. Performance</p> <p><u>    </u> Indication</p> <p><u>  X  </u> Manipulation</p> <p><u>  X  </u> Read/Interpret</p> <p><u>  X  </u> Listen/Interpret</p> <p><u>  X  </u> Voice Composition</p> <p><u>  X  </u> Situation Evaluation</p> <p><u>  X  </u> Decide Action</p>	<p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p><u>Based upon scenario events and re-</u></p> <p><u>action to changing situations as</u></p> <p><u>exercise unfolds.</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
L.1.4.3	TRAINING MANAGEMENT:	
	<p>a. Feedback</p> <p><u>  X  </u> Informative</p> <p><u>  X  </u> Evaluative</p> <p><u>    </u> Corrective</p> <p><u>  X  </u> Summary</p> <p><u>    </u> Immediate</p> <p><u>  X  </u> Delayed</p> <p>b. Presentation Control</p> <p><u>  X  </u> Learner</p> <p><u>    </u> Media</p> <p><u>  X  </u> Instructor</p>	<p>_____</p> <p><u>Evaluation of performance in meeting</u></p> <p><u>exercise (scenario) goals are indi-</u></p> <p><u>cated by instructors/supervisory</u></p> <p><u>personnel.</u></p> <p>_____</p> <p><u>After exercise completion.</u></p> <p>_____</p> <p><u>Tasks are to be completed by the</u></p> <p><u>leaders as prescribed by the scenario</u></p> <p><u>As specified in the scenario (training</u></p> <p><u>objective).</u></p>



FAMILY: L

MEMBER: 1

L.1.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<input checked="" type="checkbox"/> Linear	<u>Proceeds in accordance with training</u>
	<input type="checkbox"/> Response Branching	<u>objective</u>
	<input type="checkbox"/> History Branching	
	<input checked="" type="checkbox"/> Repetitive Practice	<u>Can repeat exercise to correct defi-</u>
		<u>ciencies.</u>
	d. Recordkeeping	
	<input type="checkbox"/> Automatic (Temporary Storage)	
	<input type="checkbox"/> Automatic (Permanent Storage)	
	<input checked="" type="checkbox"/> Manual	<u>Optional</u>
	<input type="checkbox"/> None	
L.1.5	SETTING:	
L.1.5.1	<input type="checkbox"/> INSTITUTIONAL	
	<input type="checkbox"/> Service School	
	<input type="checkbox"/> Army Training Ctr (ATC)	
	<input type="checkbox"/> Div/Post Installation Schools	
L.1.5.2	<input checked="" type="checkbox"/> UNIT	
	<input type="checkbox"/> In-System (Embedded)	
	<input type="checkbox"/> Job-Station	
	<input type="checkbox"/> Individual Learning Ctr (ILC)	
	<input type="checkbox"/> Barracks/Home	
	<input type="checkbox"/> Garrison Training Area	<u>Requires suitable terrain in which</u>
	<input checked="" type="checkbox"/> Local Training Area	<u>to conduct exercise</u>
	<input checked="" type="checkbox"/> Major Training	
	<input type="checkbox"/> National Range	

FAMILY: L

MEMBER: 1

L.1.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Terrain which will enable the meeting of training objectives</u>
		<u>(ground that lends itself to tactical decisions).</u>
L.1.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	<u>Unit specific and unit created.</u>
L.1.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u></u>
	<input type="checkbox"/> Future Date	<u></u>
	<input type="checkbox"/> Unknown	<u></u>
L.1.6.2	METHOD:	
	<input type="checkbox"/> Mail/Ship	<u></u>
	<input checked="" type="checkbox"/> Install	<u>Select terrain area for exercise.</u>
	<input type="checkbox"/> Remote Access (Telecommunications)	<u></u>
	<input type="checkbox"/> In System	<u></u>
	<input type="checkbox"/> Job Materials	<u></u>
L.1.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	<u></u>
	<input type="checkbox"/> Unit Issue	<u></u>
L.1.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Guidance: FM 21-6, Appendix E</u>
	<input type="checkbox"/> Probable	<u>Unit created.</u>
	<input type="checkbox"/> Unknown	<u></u>

FAMILY: L

MEMBER: 1

L.1.7	<u>SUPPORT REQUIREMENTS:</u>	<u>COMMENTS</u>
L.1.7.1	LOGISTICAL SUPPORT:	
	<input type="checkbox"/> Storage Areas	
	<input type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input type="checkbox"/> Expendable Material	
L.1.7.2	MAINTENANCE REQUIREMENTS:	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
L.1.7.3	MANNING REQUIREMENTS: Total = <u>1</u>	
	<input type="checkbox"/> System Operators	
	<input checked="" type="checkbox"/> Instructors/Facilitators <u>One</u>	
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
L.1.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input type="checkbox"/> Special Personnel Skills	
	<input type="checkbox"/> Special Equipment	
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY: LMEMBER: 1

L.1.8	<u>COST DATA:</u>	<u>COMMENTS</u>
L.1.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
L.1.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Use of vehicles in exercise
	<input type="checkbox"/> None	
L.1.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
L.1.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	Scenario development
	<input type="checkbox"/> None	
L.1.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Leaders
	<input type="checkbox"/> None	



FAMILY: L  
MEMBER: 1

L.1 .10 ADDITIONAL COMMENTS SHEET:

FAMILY: L  
 MEMBER: 2

L	<u>FAMILY: COMMAND/STAFF BATTLE SIMULATIONS</u>	
2	<u>MEMBER: CPX Simulation Facility</u>	
L.2.1	<u>SOURCE/PROPONENT: Tactics/Combined Arms Dept. (Operations Division)</u>	
L.2.2	<u>DESCRIPTION:</u> CPX is a computer training system. It consists of teletypes which are ON-LINE with the computer trainer and operate on a Real-Time basis, interactively with multi-users. Scenario-controlled practical exercise in which students perform the roles of battalion and higher level operations, intelligence, and fire support coordination personnel. Exercise facility is organized into a series of modules duplicating the primary equipment and facilities of FA battalion operations/intelligence sections, or DIV ARTY TOCs. Controllers and fire support personnel are located in a separate area, with necessary communications provided. Students work with controllers (other students) who prepare and transmit a continuous flow of messages to the players. Basic decisions are shown on maps and charts. Major equipment required is communication gear which requires extensive maintenance. Other requirements are personnel up to 10 instructors and 4 controllers--all of whom need knowledge of FA operations and fire support. Similar requirements are made of the students. Also required are scenario developers. Cost is low in all areas. Currently in use at USAFAS, software could be adapted for export to DIV ARTY or FA Battalion. System provides practice in the actual operation of FA operations/intelligence facilities at DIV ARTY lower levels. Students apply knowledge gained in tactics instruction under realistic conditions while filling actual positions which they may expect to hold upon graduation from OAC.	
L.2.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <div> <u>Individual</u> _____            _____            _____  <u>X Collective</u> <u>Operations section, fire support element, some intelligence section functions.</u>            _____            _____         </div>	

FAMILY: L

MEMBER: 2

L.2.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
L.2.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	<hr/> <hr/> <hr/>
	<input type="checkbox"/> Tool Applications to Unit Job Duties	<hr/> <hr/> <hr/>
	<input type="checkbox"/> Component Procedures	<hr/> <hr/> <hr/>
	<input type="checkbox"/> Task/Situation Practice	<hr/> <hr/> <hr/>
	<input checked="" type="checkbox"/> Small-Team	<u>Provides fire support coordination.</u> <u>Interaction between team members for FA</u>
	<input checked="" type="checkbox"/> Larger-Team	<u>battalion operation/intelligence and</u> <u>fire support element personnel at</u>
	<input type="checkbox"/> Multi-Unit	<u>Div/Arty or lower echelons.</u> <hr/> <hr/>
	<input checked="" type="checkbox"/> Command Staff Exercise	<hr/> <hr/>
L.2.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Controllers evaluate interaction</u> <u>of team members as they inter-</u> <u>pret and react to scenario events.</u>
	<input type="checkbox"/> Lesson Items	<hr/> <hr/> <hr/>

FAMILY: L

MEMBER: 2

L.2.3.2	<p>LEVEL OF EVALUATION (CONT'D)</p> <p style="text-align: right;"><u>COMMENTS</u></p> <p><u>Individual Performance/SQT</u></p> <p><u>Written</u></p> <p><u>Hands-On</u></p> <p><u>Performance Certification</u></p> <p><u>X</u> Team Exercise/ARTEP: FA battalion operations/intelligence and Positions or echelons fire support element personnel and interacting: DIV ARTY TOC personnel. System provides</p>
L.2.4	<p><u>CAPABILITIES:</u> (Continued on next page)</p>
L.2.4.1	<p><u>PRESENTATION:</u></p> <p>a. Visual</p> <p><u>X</u> Alphanumeric Computer printout messages and scenario</p> <p><u>X</u> Special Symbology on closed circuit TV. Standard military</p> <p><u>X</u> 2-D Graphics map symbols.</p> <p><u>3-D Graphics</u></p> <p><u>X</u> Static Displays Maps, map overlays, charts.</p> <p><u>Motion</u></p> <p><u>X</u> Color</p> <p>b. Auditory</p> <p><u>Signals/Tones</u></p> <p><u>X</u> Speech Voice communications among players and</p> <p>c. Tactile players/controllers.</p> <p><u>Size/Shape</u></p> <p><u>Positional Cues</u></p>



FAMILY:   L  

MEMBER:   2  

L.2.3.2 Team Exercise/ARTEP: (Cont'd)

highly realistic training in FA fire planning, analysis of target and intelligence information, and staff coordination.

MEMBER: 2

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FAMILY: L

MEMBER: 2

L.2.4.3	TRAINING MANAGEMENT (CONT'D)		<u>COMMENTS</u>
	c. Sequencing		
	<input checked="" type="checkbox"/> Linear	Follows scenario events and messages.	
	<input type="checkbox"/> Response Branching		
	<input type="checkbox"/> History Branching		
	<input type="checkbox"/> Repetitive Practice		
	d. Recordkeeping		
	<input checked="" type="checkbox"/> Automatic (Temporary Storage)	Computer can measure student	
	<input type="checkbox"/> Automatic (Permanent Storage)	performance & task requirements.	
	<input checked="" type="checkbox"/> Manual	Controller evaluates player	
	<input type="checkbox"/> None	responses/interactions.	
L.2.5	<u>SETTING:</u>		
L.2.5.1	<input checked="" type="checkbox"/> INSTITUTIONAL		
	<input checked="" type="checkbox"/> Service School	USAFAS	
	<input type="checkbox"/> Army Training Ctr (ATC)		
	<input type="checkbox"/> Div/Post Installation Schools		
L.2.5.2	<input checked="" type="checkbox"/> UNIT		
	<input type="checkbox"/> In-System (Embedded)		
	<input type="checkbox"/> Job-Station		
	<input type="checkbox"/> Individual Learning Ctr (ILC)		
	<input type="checkbox"/> Barracks/Home		
	<input checked="" type="checkbox"/> Garrison Training Area		
	<input type="checkbox"/> Local Training Area		
	<input type="checkbox"/> Major Training		
	<input type="checkbox"/> National Range		

FAMILY: L

MEMBER: 2

L.2.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Considerable communications support (telephones, teletypes, remote sets), X6FSA computer system, chairs, tables.</u>
L.2.6	<u>EXPORTABILITY:</u>	<u>Plans unknown. System software</u>
	<u>    In Units</u> <input checked="" type="checkbox"/> <u>    Planning</u> <u>    No</u>	<u>adaptable for export as corrective</u>
L.2.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	<u>trng. package to FA bn or Div Arty</u>
	<input checked="" type="checkbox"/> Currently Available	<u>use.</u>
	<u>    Future Date</u>	<u>At USAFAS.</u>
	<u>    Unknown</u>	
L.2.6.2	METHOD:	
	<u>    Mail/Ship</u>	
	<input checked="" type="checkbox"/> Install	
	<u>    Remote Access (Telecommunications)</u>	
	<u>    In System</u>	
	<u>    Job Materials</u>	
L.2.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	
	<u>    Unit Issue</u>	
L.2.6.4	SOURCE:	
	<u>    Known</u>	
	<input checked="" type="checkbox"/> Probable	<u>TRADOC or ATSC</u>
	<u>    Unknown</u>	



FAMILY: L  
MEMBER: 2

L.2.7	<u>SUPPORT REQUIREMENTS:</u>	
L.2.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<u>Storage Areas</u>	
	<u>X Spare Parts</u>	<u>Teletype paper, comm equipment.</u>
	<u>Additional Copies On Hand</u>	
	<u>Expendable Material</u>	
L.2.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<u>X Yes</u> <u>No</u>	
	<u>Operator</u>	
	<u>Organizational Maintenance</u>	
	<u>X Direct Support Maintenance</u>	<u>1 NCO and 3-6 EM.</u>
	<u>X General Support Maintenance</u>	<u>Setup and tear down, maintain</u>
	<u>Depot Maintenance</u>	<u>facility for communication equipment.</u>
L.2.7.3	<u>MANNING REQUIREMENTS: Total = 7-14</u>	
	<u>System Operators</u>	
	<u>X Instructors/Facilitators</u>	<u>6-10 (depends on number of students)</u>
	<u>X Simulation/Monitor Positions</u>	<u>1-4 (depends on number of students)</u>
	<u>Support Personnel</u>	
L.2.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<u>X Special Personnel Skills</u>	<u>Controllers need FA operations and fire</u>
	<u>Special Equipment</u>	<u>support planning. Experience using the</u>
	<u>Facility</u>	<u>scenario. Maintenance personnel need</u>
	<u>Reproduction</u>	<u>knowledge of communication equipment.</u>
	<u>x Update</u>	<u>Scenario developers skilled in training</u>
		<u>analysis and performance oriented</u>
		<u>training. Update frequent to keep</u>
		<u>current. Programming of the computer.</u>

FAMILY:     L    MEMBER:     2    

<u>L.2.8</u>	<u>COST DATA:</u>	<u>COMMENTS</u>
<u>L.2.8.1</u>	<u>SYSTEM ACQUISITION:</u>	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
<u>L.2.8.2</u>	<u>CURRENT OR PROJECTED OPERATIONAL COSTS:</u>	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
<u>L.2.8.3</u>	<u>MAINTENANCE COSTS:</u>	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
<u>L.2.8.4</u>	<u>TRAINING MATERIALS DEVELOPMENT:</u>	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
<u>L.2.9</u>	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input checked="" type="checkbox"/> Mental Skills	<u>FA operations and fire support planning</u>
	<input type="checkbox"/> MOS Requirements	<u>skills commensurate with student grades</u>
	<input type="checkbox"/> Aptitudes	<u>of company grade officers and senior</u>
	<input type="checkbox"/> Schools/Courses	<u>NCO's.</u>
	<input type="checkbox"/> Training	
	<input type="checkbox"/> Other	
	<input type="checkbox"/> None	

FAMILY:   L  

MEMBER:   2  

L.2.10

ADDITIONAL COMMENTS SHEET:

FAMILY: L  
 MEMBER: 3

L	<u>FAMILY:</u> COMMAND/STAFF BATTLE SIMULATIONS
3	<u>MEMBER:</u> CAMMS (Computer Assisted Map Maneuver System)
L.3.1	<u>SOURCE/PROPONENT:</u> Combines Arms Center, Ft. Leavenworth, KA.
L.3.2	<u>DESCRIPTION:</u> Using simple teletype terminals the CAMMS gives the controllers a capability of making rapid, realistic judgments on damage assessment and situation changes. The computer program, specifically designed to support military logistical problems, greatly reduces map maneuver preparation time, provides faster and more accurate results, insures objectivity, and provides historical data for analysis and critique. Player units may participate from remote field locations with terminals or centralized administrative location. The system may be used as a vehicle for training brigade and battalion personnel in proper command and staff procedures or as a framework within which the proficiency of these procedures may be evaluated. The command groups are thus trained to make decisions, employ weapons systems, and coordinate and control combined arms. Currently available for use.
L.3.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <div> <u>Individual</u> _____            _____            _____  <u>X Collective</u> <u>Exercise unit from platoon to brigade.</u>            _____            _____         </div>



FAMILY: L  
 MEMBER: 3

L.3.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
L.3.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	
	<input type="checkbox"/> Tool Applications to Unit Job Duties	
	<input type="checkbox"/> Component Procedures	
	<input type="checkbox"/> Task/Situation Practice	
	<input type="checkbox"/> Small-Team	
	<input checked="" type="checkbox"/> Larger-Team	
	<input checked="" type="checkbox"/> Multi-Unit	<u>Armor, mechanized infantry and</u>
		<u>cavalry maneuver battalions,</u>
	<input checked="" type="checkbox"/> Command Staff Exercise	<u>plus combat support and combat</u>
		<u>service support.</u>
L.3.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Evaluate ability of team to</u>
		<u>meet tactical situations.</u>
		<u>Information processing is</u>
	<input type="checkbox"/> Lesson Items	<u>computer aided.</u>

FAMILY: L  
MEMBER: 3

L.3.3	LEVEL OF EVALUATION (CONT'D)		<u>COMMENTS</u>
	<u>    </u> Individual Performance/SQT		
	<u>    </u> Written		
	<u>    </u> Hands-On		
	<u>    </u> Performance Certification		
	<u>X</u> Team Exercise/ARTEP: Positions or echelons interacting:	<u>Platoon up to full maneuver bri-</u> <u>gade.</u>	
	L.3.4 <u>CAPABILITIES:</u>		
	L.3.4.1 <u>PRESENTATION:</u>		
	a. Visual	<u>COMMENTS</u>	
	<u>X</u> Alphanumeric	<u>Written and oral messages</u>	
<u>X</u> Special Symbology	<u>Small moveable pieces representing tanks,</u>		
<u>X</u> 2-D Graphics	<u>trucks, etc. (controller use)</u>		
<u>X</u> 3-D Graphics			
<u>X</u> Static Displays	<u>Horizontal terrain map (for controller use)</u>		
<u>X</u> Motion			
<u>X</u> Color			
b. Auditory			
<u>    </u> Signals/Tones	<u>Simulation of firing and smoke as appro-</u>		
<u>X</u> Speech	<u>priate. Radio.</u>		
c. Tactile			
<u>    </u> Size/Shape			
<u>    </u> Positional Cues			

FAMILY: L  
MEMBER: 3

L.3.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>    </u> Choice Selection	
	<u>    </u> Specific Recall	
	<u>    </u> Composed/Created	
	b. Performance	
	<u>    </u> Indication	Participants react to situations and
	<u>X</u> Manipulation	events, make decisions and issue orders
	<u>X</u> Read/Interpret	Use computer to receive status infor-
	<u>X</u> Listen/Interpret	mation.
	<u>X</u> Voice Composition	
	<u>X</u> Situation Evaluation	
	<u>X</u> Decide Action	
L.3.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	<u>    </u> Informative	
	<u>X</u> Evaluative	Controller evaluation, support by com-
	<u>    </u> Corrective	puter printouts.
	<u>    </u> Summary	
	<u>X</u> Immediate	Info fed from computer to controller
	<u>X</u> Delayed	who relay to players. Battle data from
	b. Presentation Control	computer to controller to players.
	<u>X</u> Learner	Unit summaries from computer after
	<u>    </u> Media	exercise.
	<u>    </u> Instructor	Inputs affect the computer data.

MEMBER: 3

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FAMILY: L  
MEMBER: 3

L.3.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Real or simulated TOC. Computer system, teletype terminals,</u>
		<u>cabling, power source, Can use remoted terminals to control</u>
		<u>computer facility.</u>
L.3.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
L.3.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	Computer remoted through telecom facilities
	<input type="checkbox"/> Future Date	or run with civilian computers--available
	<input type="checkbox"/> Unknown	throughout the world.
L.3.6.2	METHOD:	
	<input type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input checked="" type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
L.3.6.3	BASIS OF ISSUE:	
	<input checked="" type="checkbox"/> On Demand	Computer equipment and peripheral hardware.
	<input type="checkbox"/> Unit Issue	
L.3.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	Ft. Leavenworth combined Arms Center.
	<input type="checkbox"/> Probable	
	<input type="checkbox"/> Unknown	

FAMILY: L

MEMBER: 3

L.3.7	<u>SUPPORT REQUIREMENTS:</u>	
L.3.7.1	LOGISTICAL SUPPORT:	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>As required to support system communi-</u>
	<input checked="" type="checkbox"/> Spare Parts	<u>cations local or remote to computer.</u>
	<input type="checkbox"/> Additional Copies On Hand	<u></u>
	<input type="checkbox"/> Expendable Material	<u></u>
L.3.7.2	MAINTENANCE REQUIREMENTS:	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<u>As required to maintain system.</u>
	<input checked="" type="checkbox"/> Operator	<u></u>
	<input checked="" type="checkbox"/> Organizational Maintenance	<u></u>
	<input checked="" type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
L.3.7.3	MANNING REQUIREMENTS: Total = <u>14/27</u> (Battalion/Brigade)	
	<input checked="" type="checkbox"/> System Operators	<u>4/4 computer terminal operators.</u>
	<input type="checkbox"/> Instructors/Facilitators	<u></u>
	<input checked="" type="checkbox"/> Simulation/Monitor Positions	<u>6/11 controllers (Battalion/Brigade)</u>
	<input checked="" type="checkbox"/> Support Personnel	<u>4/12 player controllers (Battalion/</u> <u>Brigade)</u>
L.3.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>4/16 hours training time for controllers.</u>
	<input type="checkbox"/> Special Equipment	<u></u>
	<input type="checkbox"/> Facility	<u></u>
	<input type="checkbox"/> Reproduction	<u></u>
	<input type="checkbox"/> Update	<u></u>

FAMILY: L  
MEMBER: 3

L.3.8	<u>COST DATA:</u>	<u>COMMENTS</u>
L.3.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.3.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input checked="" type="checkbox"/> Medium	500-1,000 for 12 hours computer time.
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.3.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.3.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input checked="" type="checkbox"/> Medium	10-20K/program
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.3.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Normal job skills.
	<input type="checkbox"/> None	

FAMILY: L  
MEMBER: 3

L.3 .10	<u>ADDITIONAL COMMENTS SHEET:</u>
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FAMILY: L  
MEMBER: 4

L	<u>FAMILY:</u> COMMAND/STAFF BATTLE SIMULATIONS
4	<u>MEMBER:</u> Combined Arms Tactical Training Simulator (CATTS)
L.4.1	<u>SOURCE/PROPONENT:</u> Combined Arms Center, Ft. Leavenworth, KA.
L.4.2	<p><u>DESCRIPTION:</u> Using CATTS trainees operate in a simulated Tactical Operations Center environment. Here, they duplicate on the job behavior - receive activity and event reports, plot the function of their units and enemy activity on their maps, make real time decisions, and communicate their decisions to their unit commanders.</p> <p>Commands are given to and reports are received from a set of controllers who act as subordinate commanders (company, platoon). However, instead of these subordinate commanders dealing with real troops, real enemies and real environment, they perform the equivalent. They deal with the computer which simulates these entities.</p> <p>The controller can view any region of the area of conflict via a map/video system consisting of a color TV camera, a map, and a color TV monitor. He can move the camera (pan, tilt, zoom) and, by operating his controls, can call up various tactical symbols, which are automatically registered with the map background picture. The CATTS has three independent controller stations; a command and control station which oversees the entire conflict, any enemy station, and a fire support station. In addition to the TV monitor display, each controller station has an alphanumeric CRT display and a hard copy printer. The alphanumeric CRT is used to present status reports and alert messages which may be printed at the controllers' discretion.</p> <p>(Continued on next page)</p>
L.4.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <p style="text-align: right;"><u>COMMENTS</u></p> <p><u>Individual</u> _____</p> <p>_____</p> <p>_____</p> <p><input checked="" type="checkbox"/> <u>Collective</u> <u>Realistic battle staff exercising. Trains Bn command groups to make decisions, coordinate and control combined arms and employ weapons systems.</u></p>

FAMILY: L

MEMBER: 4

L.4.2 DESCRIPTION: (Con'd)

These controller stations and the computer represent the center of the "artificial maneuver" activity. At the beginning of a training exercise, the enemy and the US forces are deployed according to the particular scenario chosen. As the exercise unfolds, US units are positioned and commanded to move and fight in the ways specified by the trainees in the TOC mockup; enemy forces are told what to do by the enemy controllers at their station. The computer is responsible for simulating the activities of the red and blue units and updating their status as time is advanced. Math models include terrain, weather, sensing and detection, engagement, attrition, movement, logistics, task organization, control measures, air defense, and tactical air missions. The players do not see the computer. The computer maintains the status of forces, fuel usage, amount expenditures, etc. This information is used by the controllers to realistically simulate the enemy forces with developing situations being made known to the players.

FAMILY: L  
MEMBER: 4

L.4.3 TRAINING AND EVALUATION (CONT'D)	
L.4.3.1 LEVEL OF TRAINING:	<u>COMMENTS</u>
<input type="checkbox"/> Unit Organization & Job Duties	
<input type="checkbox"/> Tool Applications to Unit Job Duties	
<input type="checkbox"/> Component Procedures	
<input type="checkbox"/> Task/Situation Practice	
<input checked="" type="checkbox"/> Small-Team	<u>Six players.</u>
<input type="checkbox"/> Larger-Team	
<input checked="" type="checkbox"/> Multi-Unit	<u>Opposing forces simulated by controllers using math modules built</u>
<input checked="" type="checkbox"/> Command Staff Exercise	<u>into the computer.</u>
L.4.3.2 LEVEL OF EVALUATION:	
<input checked="" type="checkbox"/> Module Test	<u>Evaluate ability at team players to meet tactical situations and make decisions.</u>
<input type="checkbox"/> Lesson Items	

FAMILY: L  
MEMBER: 4

L.4.3.2	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>Individual Performance/SQT</u>	
	<u>Written</u>	
	<u>Hands-On</u>	
	<u>Performance Certification</u>	
	<u>X Team Exercise/ARTEP:</u>	<u>Maneuver battalion, commanders and</u>
	<u>Positions or echelons</u>	<u>staffs</u>
	<u>interacting:</u>	
L.4.4	<u>CAPABILITIES:</u>	
L.4.4.1	<u>PRESENTATION:</u>	
	<u>a. Visual</u>	
	<u>X Alphanumeric</u>	<u>Activity reports, messages, status reports</u>
	<u>X Special Symbology</u>	<u>Smoke effects. Simulated TOC--they</u>
	<u>X 2-D Graphics</u>	<u>do not see the computer.</u>
	<u>X 3-D Graphics</u>	
	<u>X Static Displays</u>	<u>Maps, status boards as used in TOC .</u>
	<u>X Motion</u>	<u>Video tape of events to controllers</u>
	<u>X Color</u>	<u>Map based color, graphical symbols.</u>
	<u>b. Auditory</u>	
	<u>Signals/Tones</u>	<u>Engine and generator noise, battle sounds,</u>
	<u>X Speech</u>	<u>electronic war fare (from tape-drive audio</u>
		<u>system), radio</u>
	<u>c. Tactile</u>	
	<u>Size/Shape</u>	
	<u>Positional Cues</u>	



FAMILY: L  
MEMBER: 4

L.4.4.2	<p><b>RESPONSE:</b></p> <p><u>COMMENTS</u></p> <p>a. Verbal/Symbolic</p> <p>___ Choice Selection _____</p> <p>___ Specific Recall _____</p> <p>___ Composed/Created _____</p> <p>b. Performance</p> <p>___ Indication _____</p> <p><u>X</u> Manipulation <u>Plot unit/enemy activity on map</u></p> <p><u>X</u> Read/Interpret <u>Reports, messages</u></p> <p><u>X</u> Listen/Interpret <u>Reports, messages</u></p> <p><u>X</u> Voice Composition <u>Pass decisions</u></p> <p><u>X</u> Situation Evaluation <u>Actions, real time decisions, coordin-</u></p> <p><u>X</u> Decide Action <u>action.</u></p> <p><u>Respond to events</u></p>
L.4.4.3	<p><b>TRAINING MANAGEMENT:</b></p> <p>a. Feedback</p> <p><u>X</u> Informative <u>Dynamic as battle losses occur</u></p> <p><u>X</u> Evaluative <u>Messages and status reports are re-</u></p> <p><u>X</u> Corrective <u>ceived by players from which subse-</u></p> <p><u>X</u> Summary <u>quent actions occur.</u></p> <p><u>X</u> Immediate <u>As battle losses occur video taped</u></p> <p><u>X</u> Delayed <u>replay of command decisions with cri-</u></p> <p>b. Presentation Control <u>tique and printouts.</u></p> <p><u>X</u> Learner <u>Real time computer driven enemy</u></p> <p><u>X</u> Media <u>force reacting to friendly actions.</u></p> <p><u>X</u> Instructor <u>Controllers react to computer and in-</u></p> <p><u>put to players.</u></p>

FAMILY: L  
MEMBER: 4

L.4.4.3	TRAINING MANAGEMENT (CONT'D) <div style="text-align: right;"><u>COMMENTS</u></div>
	c. Sequencing <div style="margin-left: 40px;"> <input checked="" type="checkbox"/> Linear <u>Presentation is real time computer</u>  <input type="checkbox"/> Response Branching <u>driven enemy force reacting to friendly</u>  <input type="checkbox"/> History Branching <u>actions by players. Controllers react</u>  <input type="checkbox"/> Repetitive Practice <u>to information presented by computer.</u>  <div style="text-align: right;">(Continued on next page)</div> </div>
	d. Recordkeeping <div style="margin-left: 40px;"> <input checked="" type="checkbox"/> Automatic (Temporary Storage) <u>Printouts of summaries.</u>  <input type="checkbox"/> Automatic (Permanent Storage) <u>Video tape of events.</u>  <input checked="" type="checkbox"/> Manual <u>Controller/player option</u>  <input type="checkbox"/> None _____         </div>
L.4.5	<u>SETTING:</u>
L.4.5.1	<input checked="" type="checkbox"/> INSTITUTIONAL
	<div style="margin-left: 40px;"> <input checked="" type="checkbox"/> Service School <u>Available at Ft. Leavenworth</u>  <input type="checkbox"/> Army Training Ctr (ATC) _____  <input type="checkbox"/> Div/Post Installation Schools _____         </div>
L.4.5.2	<input checked="" type="checkbox"/> UNIT
	<div style="margin-left: 40px;"> <input type="checkbox"/> In-System (Embedded) _____  <input type="checkbox"/> Job-Station _____  <input type="checkbox"/> Individual Learning Ctr (ILC) _____  <input type="checkbox"/> Barracks/Home _____  <input checked="" type="checkbox"/> Garrison Training Area _____  <input type="checkbox"/> Local Training Area _____  <input type="checkbox"/> Major Training _____  <input type="checkbox"/> National Range _____         </div>

FAMILY: L  
MEMBER: 4

L.4.5.3	<u>X</u> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Large enough to house a computer and interactive terminals. Also</u> <u>need to simulate a Tactical Operation Center (TOC). Cabling,</u> <u>power sources, teletyper, peripheral equipment.</u>
L.4.6	<u>EXPORTABILITY:</u>	
	<u>    </u> In Units <u>X</u> Planning <u>    </u> No <u>Procurement for 6 systems</u>	
L.4.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>    </u> Currently Available	
	<u>X</u> Future Date	<u>1980</u>
	<u>    </u> Unknown	
L.4.6.2	METHOD:	
	<u>    </u> Mail/Ship	
	<u>X</u> Install	
	<u>    </u> Remote Access (Telecommunications)	
	<u>    </u> In System	
	<u>    </u> Job Materials	
L.4.6.3	BASIS OF ISSUE:	
	<u>    </u> On Demand	
	<u>X</u> Unit Issue	<u>To regions worldwide</u>
L.4.6.4	SOURCE:	
	<u>X</u> Known	<u>Ft. Leavenworth, Kansas</u>
	<u>    </u> Probable	
	<u>    </u> Unknown	

FAMILY: L  
MEMBER: 4

L.4.7	<u>SUPPORT REQUIREMENTS:</u>	
L.4.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	Computer and peripheral equipment as
	<input checked="" type="checkbox"/> Spare Parts	required to support system.
	<input type="checkbox"/> Additional Copies On Hand	
	<input checked="" type="checkbox"/> Expendable Material	Teletype paper, forms.
L.4.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
	<input checked="" type="checkbox"/> Operator	Operate computer.
	<input checked="" type="checkbox"/> Organizational Maintenance	Computer and software support
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
L.4.7.3	<u>MANNING REQUIREMENTS: Total = 15</u>	
	<input checked="" type="checkbox"/> System Operators	For video equipment, computer
	<input type="checkbox"/> Instructors/Facilitators	
	<input checked="" type="checkbox"/> Simulation/Monitor Positions	Controllers act as subordinate
	<input type="checkbox"/> Support Personnel	commanders, (company, platoon).
		(Continued on next page)
L.4.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	Ability to upkeep/modify computer
	<input checked="" type="checkbox"/> Special Equipment	software, Video equipment.
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input checked="" type="checkbox"/> Update	Software and initial scenario conditions as required.



FAMILY   L    
MEMBER   4  

L.4.7.3 MANNING REQUIREMENTS: (Cont'd)

Interact with computer (enemy). Also view the area of conflict and call up tactical symbols to register on map.

FAMILY: LMEMBER: 4

L.4.8	<u>COST DATA:</u>	<u>COMMENTS</u>
L.4.8.1	SYSTEM ACQUISITION:	
	<input checked="" type="checkbox"/> High	<u>3+ million</u>
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.4.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input checked="" type="checkbox"/> High	<u>1+ thousand/4 days</u>
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.4.8.3	MAINTENANCE COSTS:	
	<input checked="" type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.4.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input checked="" type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.4.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Normal job requirements.</u>
	<input type="checkbox"/> None	

FAMILY: L

MEMBER: 4

L.4.10 ADDITIONAL COMMENTS SHEET:

FAMILY: L

MEMBER: 5

L	<u>FAMILY:</u> COMMAND/STAFF BATTLE SIMULATIONS
5	<u>MEMBER:</u> FIREFIGHT
L.5.1	<u>SOURCE/PROPONENT:</u> Combined Arms Center, Ft. Leavenworth, KA.
L.5.2	<p><u>DESCRIPTION:</u></p> <p>FIREFIGHT is a two-man 1-3 hour board game based upon a scenario that is designed for platoon leaders. It is designed to illustrate several factors which affect the outcome of the first battles of the next war. These factors include the range and lethality of weapons, the use of terrain, and the employment of suppressive forces and smoke to neutralize enemy weapons. FIREFIGHT requires two players who conduct operations on a map using cardboard counters. It has limited use for field artillery. There are two scenarios, generally in a European setting. The map board is fixed with the players making decisions and taking actions dynamically. Players use dice to determine probability of results. FIREFIGHT has the modules that increase in complexity. FIREFIGHT has been distributed to CONUS and overseas locations.</p>
L.5.3	<p><u>TRAINING AND EVALUATION APPLICATIONS:</u></p> <div style="text-align: right; margin-right: 100px;"><u>COMMENTS</u></div> <p><u>Individual</u> _____</p> <p>_____</p> <p>_____</p> <p><u>X Collective</u> <u>Platoon level in which a two-man interaction is permitted using a map board.</u></p> <p>_____</p> <p>_____</p>



FAMILY: L  
 MEMBER: 5

L.5.3	<u>TRAINING AND EVALUATION</u> (CONT'D)	
L.5.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	   
	<input type="checkbox"/> Tool Applications to Unit Job Duties	  
	<input type="checkbox"/> Component Procedures	  
	<input type="checkbox"/> Task/Situation Practice	  
	<input type="checkbox"/> Small-Team	  
	<input type="checkbox"/> Larger-Team	  
	<input type="checkbox"/> Multi-Unit	  
	<input checked="" type="checkbox"/> Command Staff Exercise	<u>Platoon level battle simulation.</u>  
L.5.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Variable free play in which</u> <u>results are determined by</u> <u>probability. After-action</u>
	<input type="checkbox"/> Lesson Items	<u>reports are part of system.</u>  

FAMILY: L

MEMBER: 5

L.5.3	<p>LEVEL OF EVALUATION (CONT'D)</p>
	<p><u>COMMENTS</u></p>
	<p><u>Individual Performance/SQT</u></p>
	<p><u>Written</u></p>
	<p><u>Hands-On</u></p>
	<p><u>Performance Certification</u></p>
	<p><u>X Team Exercise/ARTEP:</u> <u>Battle simulation at platoon level.</u></p>
	<p><u>Positions or echelons interacting:</u> <u>Platoon versus enemy company</u></p>
L.5.4	<p><u>CAPABILITIES:</u></p>
L.5.4.1	<p><u>PRESENTATION:</u></p>
	<p>a. Visual</p>
	<p><u>X Alphanumeric</u> <u>Map board in which players move pieces</u></p>
	<p><u>X Special Symbology</u> <u>representing unit equipment and personnel</u></p>
	<p><u>X 2-D Graphics</u> <u>in tactical situations.</u></p>
	<p><u>3-D Graphics</u></p>
	<p><u>X Static Displays</u></p>
	<p><u>Motion</u></p>
	<p><u>Color</u></p>
	<p>b. Auditory</p>
	<p><u>Signals/Tones</u></p>
	<p><u>Speech</u></p>
	<p>c. Tactile</p>
	<p><u>Size/Shape</u></p>
	<p><u>Positional Cues</u></p>

FAMILY: L  
MEMBER: 5

L.5.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	___ Choice Selection	_____
	___ Specific Recall	_____
	___ Composed/Created	_____
	b. Performance	
	___ Indication	_____
	<u>X</u> Manipulation	Board process.
	___ Read/Interpret	_____
	___ Listen/Interpret	_____
	___ Voice Composition	_____
	<u>X</u> Situation Evaluation	Dynamic play to simulated tactical
	<u>X</u> Decide Action	situations.
L.5.4.3	TRAINING MANAGEMENT:	
	a. Feedback	
	<u>X</u> Informative	Based on results of actions and
	<u>X</u> Evaluative	decisions occurring in simulated
	<u>X</u> Corrective	tactical situations.
	<u>X</u> Summary	_____
	<u>X</u> Immediate	Based on probability of results and
	<u>X</u> Delayed	resulting actions by opposing forces
	b. Presentation Control	after-action reports.
	<u>X</u> Learner	Scenario events and interaction of
	___ Media	players
	___ Instructor	_____

FAMILY: L

MEMBER: 5

L.5.4.3	TRAINING MANAGEMENT (CONT'D)		<u>COMMENTS</u>
	c. Sequencing		
	<u>X</u> Linear	<u>Scenario events and dynamic play.</u>	
	<u>    </u> Response Branching		
	<u>    </u> History Branching		
	<u>    </u> Repetitive Practice		
	d. Recordkeeping		
	<u>    </u> Automatic (Temporary Storage)		
	<u>    </u> Automatic (Permanent Storage)		
	<u>X</u> Manual	<u>After action reports.</u>	
	<u>    </u> None		
L.5.5	<u>SETTING:</u>		
L.5.5.1	<u>X</u> INSTITUTIONAL		
	<u>X</u> Service School	<u>Ft. Leavenworth, KA</u>	
	<u>    </u> Army Training Ctr (ATC)		
	<u>    </u> Div/Post Installation Schools		
L.5.5.2	<u>X</u> UNIT		
	<u>    </u> In-System (Embedded)		
	<u>    </u> Job-Station		
	<u>    </u> Individual Learning Ctr (ILC)		
	<u>    </u> Barracks/Home		
	<u>X</u> Garrison Training Area		
	<u>    </u> Local Training Area		
	<u>    </u> Major Training		
	<u>    </u> National Range		



FAMILY: L  
MEMBER: 5

L.5.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
	Table, 2 chairs, map board, dice.	
L.5.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
L.5.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input checked="" type="checkbox"/> Currently Available	<u>Shipped to CONUS and overseas units.</u>
	<input type="checkbox"/> Future Date	
	<input type="checkbox"/> Unknown	
L.5.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
L.5.6.3	BASIS OF ISSUE:	
	<input type="checkbox"/> On Demand	
	<input checked="" type="checkbox"/> Unit Issue	
L.5.6.4	SOURCE:	
	<input checked="" type="checkbox"/> Known	<u>Ft. Leavenworth, KA</u>
	<input type="checkbox"/> Probable	
	<input type="checkbox"/> Unknown	

FAMILY: L  
MEMBER: 5

L.5.7 <u>SUPPORT REQUIREMENTS:</u>		<u>COMMENTS</u>
L.5.7.1	LOGISTICAL SUPPORT:	
	<input type="checkbox"/> Storage Areas	
	<input type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input type="checkbox"/> Expendable Material	
L.5.7.2	MAINTENANCE REQUIREMENTS:	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
L.5.7.3	MANNING REQUIREMENTS: Total = <u>0</u>	
	<input type="checkbox"/> System Operators	
	<input type="checkbox"/> Instructors/Facilitators	
	<input type="checkbox"/> Simulation/Monitor Positions	
	<input type="checkbox"/> Support Personnel	
L.5.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input type="checkbox"/> Special Personnel Skills	
	<input type="checkbox"/> Special Equipment	
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input checked="" type="checkbox"/> Update	<u>Modification of scenario.</u>

FAMILY: LMEMBER: 5

L.5.8	<u>COST DATA:</u>	<u>COMMENTS</u>
L.5.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.5.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.5.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
L.5.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.5.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	<u>Platoon leaders.</u>
	<input type="checkbox"/> None	

FAMILY: L  
MEMBER: 5

L.5.10 ADDITIONAL COMMENTS SHEET:



FAMILY: L  
MEMBER: 6

L	<u>FAMILY:</u> COMMAND/STAFF BATTLE SIMULATIONS												
6	<u>MEMBER:</u> DUNN KEMPF												
L.6.1	<u>SOURCE/PROPONENT:</u> Combined Arms Center, Ft. Leavenworth, KA												
L.6.2	<u>DESCRIPTION:</u> <p>DUNN KEMPF is a manual battle simulation game designed for a minimum of 8 players with 1 controller for training at the company level. DUNN KEMPF consists of a scaled terrain board with miniature models of US and enemy equipment and weapon systems. The scenario is currently designed around European type terrain. During play, the miniature weapons systems are physically moved and fought by opposing force players in accordance with the prescribed rules under the monitorship of one controller. It is a relatively free exercise play. A curtain or drape is used to screen the view of opposing forces. DUNN KEMPF is particularly appropriate for training at company level and below in small unit tactics, weapons systems capabilities and lethality, weapon employment and relationship of terrain. Players use dice to determine probability of results. It takes about two hours to train the controller. DUNN KEMPF is currently being sent to active units.</p>												
L.6.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <table border="0" style="width: 100%;"> <thead> <tr> <th style="width: 60%;"></th> <th style="width: 40%; text-align: center;"><u>COMMENTS</u></th> </tr> </thead> <tbody> <tr> <td><u>Individual</u></td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> <tr> <td><u>X Collective</u></td> <td><u>Company level in which a minimum of 8 players simulate opposing forces.</u></td> </tr> <tr> <td></td> <td>_____</td> </tr> </tbody> </table>		<u>COMMENTS</u>	<u>Individual</u>	_____		_____		_____	<u>X Collective</u>	<u>Company level in which a minimum of 8 players simulate opposing forces.</u>		_____
	<u>COMMENTS</u>												
<u>Individual</u>	_____												
	_____												
	_____												
<u>X Collective</u>	<u>Company level in which a minimum of 8 players simulate opposing forces.</u>												
	_____												

FAMILY: L  
MEMBER: 6

L.6.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
L.6.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	
	<input type="checkbox"/> Tool Applications to Unit Job Duties	
	<input type="checkbox"/> Component Procedures	
	<input type="checkbox"/> Task/Situation Practice	
	<input type="checkbox"/> Small-Team	
	<input type="checkbox"/> Larger-Team	
	<input type="checkbox"/> Multi-Unit	
	<input checked="" type="checkbox"/> Command Staff Exercise	<u>Company level battle simulation.</u>
L.6.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Results of decisions/actions to</u> <u>counter opposing forces are</u> <u>evaluated. Probability of results</u>
	<input type="checkbox"/> Lesson Items	<u>determined by dice used by each</u> <u>opposing force.</u>

FAMILY: LMEMBER: 6

L.6.3	LEVEL OF EVALUATION (CONT'D)	<u>COMMENTS</u>
	<u>Individual Performance/SQT</u>	
	<u>Written</u>	
	<u>Hands-On</u>	
	<u>Performance Certification</u>	
	<u>X</u> Team Exercise/ARTEP: Positions or echelons interacting:	<u>Battle simulation at company level.</u>
L.6.4	<u>CAPABILITIES:</u>	
L.6.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	<u>Terrain table with miniature models.</u>
	<u>X</u> Special Symbology	<u>Messages, reports.</u>
	<u>X</u> 2-D Graphics	
	<u>X</u> 3-D Graphics	
	<u>X</u> Static Displays	
	<u>X</u> Motion	<u>Movement of pieces.</u>
	<u>X</u> Color	
	b. Auditory	
	<u>Signals/Tones</u>	
	<u>X</u> Speech	<u>Communication among team members.</u>
	c. Tactile	
	<u>Size/Shape</u>	
	<u>X</u> Positional Cues	<u>Position of miniature pieces.</u>

FAMILY: L  
MEMBER: 6

L.6.4.2 RESPONSE:		COMMENTS
a. Verbal/Symbolic		
<input type="checkbox"/> Choice Selection		
<input type="checkbox"/> Specific Recall		
<input type="checkbox"/> Composed/Created		
b. Performance		
<input type="checkbox"/> Indication		Actions occur as they would in real
<input checked="" type="checkbox"/> Manipulation		battle conditions. Pieces of equip-
<input checked="" type="checkbox"/> Read/Interpret		ment are moved to simulate actions and
<input checked="" type="checkbox"/> Listen/Interpret		decisions taken to combat enemy actions
<input type="checkbox"/> Voice Composition		in opposing forces situation.
<input checked="" type="checkbox"/> Situation Evaluation		
<input checked="" type="checkbox"/> Decide Action		
L.6.4.3 TRAINING MANAGEMENT:		
a. Feedback		
<input checked="" type="checkbox"/> Informative		Based on results of actions and
<input checked="" type="checkbox"/> Evaluative		decisions occurring in simulated
<input checked="" type="checkbox"/> Corrective		tactical situations.
<input checked="" type="checkbox"/> Summary		
<input checked="" type="checkbox"/> Immediate		Based on actions/results of opposing
<input checked="" type="checkbox"/> Delayed		forces. After-action reports and
b. Presentation Control		
<input checked="" type="checkbox"/> Learner		Scenario events and interaction of team
<input type="checkbox"/> Media		members.
<input checked="" type="checkbox"/> Instructor		Controller monitors battle.



MEMBER: 6

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FAMILY: L  
MEMBER: 6

L.6.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Table, terrain board, curtain or drape, space to set up</u>
		<u>equipment.</u>
L.6.6	<u>EXPORTABILITY:</u>	
	<input checked="" type="checkbox"/> In Units <input type="checkbox"/> Planning <input type="checkbox"/> No	
L.6.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<input type="checkbox"/> Currently Available	
	<input checked="" type="checkbox"/> Future Date	<u>October 1977 from TASC, Ft. Sill, OK.</u>
	<input type="checkbox"/> Unknown	
L.6.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<input type="checkbox"/> Install	
	<input type="checkbox"/> Remote Access (Telecommunications)	
	<input type="checkbox"/> In System	
	<input type="checkbox"/> Job Materials	
L.6.6.3	BASIS OF ISSUE:	
	<input type="checkbox"/> On Demand	
	<input checked="" type="checkbox"/> Unit Issue	
L.6.6.4	SOURCE:	
	<input type="checkbox"/> Known	
	<input checked="" type="checkbox"/> Probable	<u>TASC, Ft. Sill, OK.</u>
	<input type="checkbox"/> Unknown	

FAMILY: L  
MEMBER: 6

L.6.7	<u>SUPPORT REQUIREMENTS:</u>	
L.6.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	Terrain map and table.
	<input type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input type="checkbox"/> Expendable Material	
L.6.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
L.6.7.3	<u>MANNING REQUIREMENTS: Total = <u>1</u></u>	
	<input type="checkbox"/> System Operators	
	<input type="checkbox"/> Instructors/Facilitators	
	<input checked="" type="checkbox"/> Simulation/Monitor Positions	<u>1 Controller, 8 Players.</u>
	<input type="checkbox"/> Support Personnel	
L.6.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>Two hours to train controller.</u>
	<input type="checkbox"/> Special Equipment	
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY: LMEMBER: 6

L.6.8	<u>COST DATA:</u>	<u>COMMENTS</u>
L.6.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.6.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.6.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
L.6.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.6.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Company leaders.
	<input type="checkbox"/> None	



FAMILY: L

MEMBER: 6

L.6.10 ADDITIONAL COMMENTS SHEET:

FAMILY: L  
 MEMBER: 7

L	<u>FAMILY:</u> COMMAND/STAFF BATTLE SIMULATION									
7	<u>MEMBER:</u> PEGASUS									
L.7.1	<u>SOURCE/PROPONENT:</u> Command Arms Center, Ft. Leavenworth, KA.									
L.7.2	<u>DESCRIPTION:</u> <p>PEGASUS is a closed, free play exercise designed to train brigade and battalion commanders and their staffs in the control and coordination of combined arms operations. The current scenario is set in Leavenworth, Kansas, on terrain representative of that found in Germany. The exercise uses a horizontal map on which a brigade command group and two battalion command groups execute plans/OPORDs against an appropriate enemy force. The exercise requires the proper reporting procedures from controllers to the command group. Orders are passed from the command group to the controllers and the controllers execute instructions in accordance with game rules. The exercise usually lasts 4 to 8 hours. Command group requires 23-29 players/controllers with 5 umpires (controllers). The controller personnel execute operations on an enlarged map sheet superimposed with a hexagonal grid to control movement rates. The controllers move subordinate units, conduct engagements, and employ indirect fires for the purpose of providing message play in a realistic CPX environment against an opposing force. Normal unit communication equipment and CPX facilities are used. PEGASUS is to be ready for Army-wide distribution in February 1978.</p>									
L.7.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u> <div style="text-align: right;"><u>COMMENTS</u></div> <table border="0" style="width: 100%;"> <tr> <td style="width: 20%;"><u>Individual</u></td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> <tr> <td></td> <td>_____</td> </tr> <tr> <td><u>X Collective</u></td> <td>Brigade and battalion level to exercise command staffs in combined arms operations against a realistically simulated opposing force.</td> </tr> </table>		<u>Individual</u>	_____		_____		_____	<u>X Collective</u>	Brigade and battalion level to exercise command staffs in combined arms operations against a realistically simulated opposing force.
<u>Individual</u>	_____									
	_____									
	_____									
<u>X Collective</u>	Brigade and battalion level to exercise command staffs in combined arms operations against a realistically simulated opposing force.									

FAMILY: L

MEMBER: 7

L.7.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
L.7.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	   
	<input type="checkbox"/> Tool Applications to Unit Job Duties	  
	<input type="checkbox"/> Component Procedures	  
	<input type="checkbox"/> Task/Situation Practice	  
	<input type="checkbox"/> Small-Team	  
	<input type="checkbox"/> Larger-Team	  
	<input type="checkbox"/> Multi-Unit	  
	<input checked="" type="checkbox"/> Command Staff Exercise	<u>Brigade and battalion staffs.</u>  
L.7.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Results of decisions/actions in combined arms operations against an opposing force. Actions are evaluated based upon subsequent actions and results of engagements.</u>  
	<input type="checkbox"/> Lesson Items	  

FAMILY: LMEMBER: 7

L.7.3	LEVEL OF EVALUATION (CONT'D)	
		<u>COMMENTS</u>
	<u>Individual Performance/SQT</u>	
	<u>Written</u>	
	<u>Hands-On</u>	
	<u>Performance Certification</u>	
	<u>X</u> Team Exercise/ARTEP:	
	Positions or echelons interacting:	Battle simulation at Brigade and battalion staff level.
L.7.4	<u>CAPABILITIES:</u>	
L.7.4.1	<u>PRESENTATION:</u>	
	a. Visual	
	<u>X</u> Alphanumeric	<u>Simulated or actual TOC. Game is played</u>
	<u>X</u> Special Symbolology	<u>on horizontal map with hexagonal overlay.</u>
	<u>X</u> 2-D Graphics	<u>Messages, reports.</u>
	<u>3-D Graphics</u>	
	<u>X</u> Static Displays	<u>Maps, status boards.</u>
	<u>X</u> Motion	
	<u>X</u> Color	
	b. Auditory	
	<u>Signals/Tones</u>	
	<u>X</u> Speech	<u>Radio communication.</u>
	c. Tactile	
	<u>Size/Shape</u>	
	<u>X</u> Positional Cues	<u>Position of forces on map.</u>



FAMILY: L  
MEMBER: 7

L.7.4.2 RESPONSE:		COMMENTS
a. Verbal/Symbolic		
<input type="checkbox"/> Choice Selection		
<input type="checkbox"/> Specific Recall		
<input type="checkbox"/> Composed/Created		
b. Performance		
<input type="checkbox"/> Indication		Actions occur as they would in real
<input checked="" type="checkbox"/> Manipulation		battle situations. Command group
<input checked="" type="checkbox"/> Read/Interpret		interacts with players/controllers who
<input checked="" type="checkbox"/> Listen/Interpret		react to decisions/actions according
<input checked="" type="checkbox"/> Voice Composition		to game rules.
<input checked="" type="checkbox"/> Situation Evaluation		
<input checked="" type="checkbox"/> Decide Action		
L.7.4.3 TRAINING MANAGEMENT:		
a. Feedback		
<input checked="" type="checkbox"/> Informative		Based on results of actions and decisions
<input checked="" type="checkbox"/> Evaluative		occurring in simulated tactical situ-
<input checked="" type="checkbox"/> Corrective		ations. Commander reacts to messages.
<input checked="" type="checkbox"/> Summary		Does not see game board.
<input checked="" type="checkbox"/> Immediate		Combat Result Tables.
<input checked="" type="checkbox"/> Delayed		After action reports and critiques.
b. Presentation Control		
<input checked="" type="checkbox"/> Learner		Scenario events and interaction of
<input type="checkbox"/> Media		command group with player/controllers.
<input checked="" type="checkbox"/> Instructor		Controllers monitor game.

FAMILY: LMEMBER: 7

L.7.4.3	TRAINING MANAGEMENT (CONT'D)	
		<u>COMMENTS</u>
	c. Sequencing	
	<input checked="" type="checkbox"/> Linear	Scenario events and dynamic play.
	<input type="checkbox"/> Response Branching	
	<input type="checkbox"/> History Branching	
	<input type="checkbox"/> Repetitive Practice	
	d. Recordkeeping	
	<input type="checkbox"/> Automatic (Temporary Storage)	
	<input type="checkbox"/> Automatic (Permanent Storage)	
	<input checked="" type="checkbox"/> Manual	After action reports & critiques.
	<input type="checkbox"/> None	
L.7.5	<u>SETTING:</u>	
L.7.5.1	<input checked="" type="checkbox"/> INSTITUTIONAL	
	<input checked="" type="checkbox"/> Service School	Ft. Leavenworth, KA.
	<input type="checkbox"/> Army Training Ctr (ATC)	
	<input type="checkbox"/> Div/Post Installation Schools	
L.7.5.2	<input checked="" type="checkbox"/> UNIT	
	<input type="checkbox"/> In-System (Embedded)	
	<input type="checkbox"/> Job-Station	
	<input type="checkbox"/> Individual Learning Ctr (ILC)	
	<input type="checkbox"/> Barracks/Home	
	<input checked="" type="checkbox"/> Garrison Training Area	
	<input type="checkbox"/> Local Training Area	
	<input type="checkbox"/> Major Training	
	<input type="checkbox"/> National Range	

FAMILY: L

MEMBER: 7

L.7.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Simulated or actual TOC. Game board and ancillary equipment.</u>
		<u>Normal communication net and equipment.</u>
L.7.6	<u>EXPORTABILITY:</u>	
	<u>    </u> In Units <input checked="" type="checkbox"/> Planning <u>    </u> No	
L.7.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>    </u> Currently Available	
	<input checked="" type="checkbox"/> Future Date	<u>February 1978.</u>
	<u>    </u> Unknown	
L.7.6.2	METHOD:	
	<input checked="" type="checkbox"/> Mail/Ship	
	<u>    </u> Install	
	<u>    </u> Remote Access (Telecommunications)	
	<u>    </u> In System	
	<u>    </u> Job Materials	
L.7.6.3	BASIS OF ISSUE:	
	<u>    </u> On Demand	
	<input checked="" type="checkbox"/> Unit Issue	<u>One per maneuver brigade.</u>
L.7.6.4	SOURCE:	
	<u>    </u> Known	
	<input checked="" type="checkbox"/> Probable	<u>Ft. Leavenworth, KA.</u>
	<u>    </u> Unknown	

FAMILY: L  
MEMBER: 7

L.7.7	<u>SUPPORT REQUIREMENTS:</u>	
L.7.7.1	<u>LOGISTICAL SUPPORT:</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/> Storage Areas	<u>Map and table for game.</u>
	<input type="checkbox"/> Spare Parts	<u></u>
	<input type="checkbox"/> Additional Copies On Hand	<u></u>
	<input type="checkbox"/> Expendable Material	<u></u>
.7.2	<u>MAINTENANCE REQUIREMENTS:</u>	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<u></u>
	<input type="checkbox"/> Operator	<u></u>
	<input type="checkbox"/> Organizational Maintenance	<u></u>
	<input type="checkbox"/> Direct Support Maintenance	<u></u>
	<input type="checkbox"/> General Support Maintenance	<u></u>
	<input type="checkbox"/> Depot Maintenance	<u></u>
.7.3	<u>MANNING REQUIREMENTS: Total = 28-34</u>	
	<input type="checkbox"/> System Operators	<u></u>
	<input type="checkbox"/> Instructors/Facilitators	<u></u>
	<input checked="" type="checkbox"/> Simulation/Monitor Positions	<u>23-29 controller players, 5 controllers.</u>
	<input type="checkbox"/> Support Personnel	<u></u>
.7.4	<u>SCHOOL OPERATIONAL SUPPORT:</u>	
	<input checked="" type="checkbox"/> Special Personnel Skills	<u>Controller 1 day training.</u>
	<input type="checkbox"/> Special Equipment	<u></u>
	<input type="checkbox"/> Facility	<u></u>
	<input type="checkbox"/> Reproduction	<u></u>
	<input type="checkbox"/> Update	<u></u>



FAMILY: LMEMBER: 7

L.7.8	<u>COST DATA:</u>	<u>COMMENTS</u>
L.7.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.7.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.7.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
L.7.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.7.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Brigade and battalion command staff.
	<input type="checkbox"/> None	

FAMILY: L  
MEMBER: 7

L.7.10 ADDITIONAL COMMENTS SHEET:

FAMILY: L  
 MEMBER: 8

L	<u>FAMILY:</u> COMMAND/STAFF BATTLE SIMULATIONS	
8	<u>MEMBER:</u> First Battle	
L.8.1	<u>SOURCE/PROPONENT:</u> Combined Arms Center, Ft. Leavenworth, KA.	
L.8.2	<u>DESCRIPTION:</u> First Battle is a free play, open or closed exercise which uses a 12-hour war game scenario. It is currently the only manual battle simulation which plays at US division level. It is designed to provide an opportunity to control and coordinate combined arms operations in a simulated tactical environment. The scenario is that of a US armored division defending against a threat tank army of 4 tank divisions and one motorized rifle division. Participants include players, players/controllers, and one controller. Main gain aids are tactical and scale maps. Most action is planned and developed by participants. Threat units are played at battalion level and the friendly units at company level. Each unit has a relative combat power value and when engagement between opposing units occurs, both sides are attrited by using probability tables which reduce the combat power value in each succeeding engagement. Currently being tested in the field for final production, methods of adaptation to all potential consumers are also under study.	
L.8.3	<u>TRAINING AND EVALUATION APPLICATIONS:</u>  <div style="display: flex; justify-content: space-between;"> <div> <input type="checkbox"/> Individual   <input checked="" type="checkbox"/> Collective         </div> <div> <u>COMMENTS</u>   <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div> <div style="border-bottom: 1px solid black; width: 100%;"></div> </div> </div>	

FAMILY: L  
MEMBER: 8

L.8.3	<u>TRAINING AND EVALUATION (CONT'D)</u>	
L.8.3.1	LEVEL OF TRAINING:	<u>COMMENTS</u>
	<input type="checkbox"/> Unit Organization & Job Duties	   
	<input type="checkbox"/> Tool Applications to Unit Job Duties	  
	<input type="checkbox"/> Component Procedures	  
	<input type="checkbox"/> Task/Situation Practice	  
	<input type="checkbox"/> Small-Team	  
	<input type="checkbox"/> Larger-Team	  
	<input type="checkbox"/> Multi-Unit	  
	<input checked="" type="checkbox"/> Command Staff Exercise	<u>Division command groups.</u>  
L.8.3.2	LEVEL OF EVALUATION:	
	<input checked="" type="checkbox"/> Module Test	<u>Results of decisions/actions in</u> <u>combined arms operations.</u>  
	<input type="checkbox"/> Lesson Items	   



MEMBER: 8

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FAMILY: L

MEMBER: 8

L.8.4.2	RESPONSE:	<u>COMMENTS</u>
	a. Verbal/Symbolic	
	<u>    </u> Choice Selection	
	<u>    </u> Specific Recall	
	<u>    </u> Composed/Created	
	b. Performance	
	<u>    </u> Indication	
	<u>  X  </u> Manipulation	<u>Actions occur as they would in real</u>
	<u>  X  </u> Read/Interpret	<u>battle situation. Controller/players</u>
	<u>  X  </u> Listen/Interpret	<u>interact with players who decide</u>
	<u>  X  </u> Voice Composition	<u>results based on game rules and pro-</u>
	<u>  X  </u> Situation Evaluation	<u>bability tables.</u>
	<u>  X  </u> Decide Action	
	L.8.4.3 TRAINING MANAGEMENT:	
	a. Feedback	
	<u>  X  </u> Informative	<u>Based on results of actions and</u>
	<u>  X  </u> Evaluative	<u>decisions as would occur in normal</u>
	<u>  X  </u> Corrective	<u>operations in TOC.</u>
	<u>  X  </u> Summary	
	<u>  X  </u> Immediate	
	<u>  X  </u> Delayed	<u>After action reports and critiques.</u>
	b. Presentation Control	
	<u>  X  </u> Learner	<u>Scenario events and interaction of</u>
	<u>    </u> Media	<u>players with controller/players.</u>
	<u>    </u> Instructor	<u>Umpire can intervene.</u>

FAMILY: LMEMBER: 8

## L.8.4.3 TRAINING MANAGEMENT (CONT'D)

COMMENTS

## c. Sequencing

<input checked="" type="checkbox"/> Linear	<u>Almost unlimited game possibilities</u>
<input type="checkbox"/> Response Branching	<u>based upon interaction of players and</u>
<input type="checkbox"/> History Branching	<u>results of interactions.</u>
<input type="checkbox"/> Repetitive Practice	<u></u>

## d. Recordkeeping

<input type="checkbox"/> Automatic (Temporary Storage)	<u></u>
<input type="checkbox"/> Automatic (Permanent Storage)	<u></u>
<input checked="" type="checkbox"/> Manual	<u>After action reports &amp; critiques.</u>
<input type="checkbox"/> None	<u></u>

L.8.5 SETTING:L.8.5.1 ☒ INSTITUTIONAL

<input checked="" type="checkbox"/> Service School	<u>Ft. Leavenworth, KA.</u>
<input type="checkbox"/> Army Training Ctr (ATC)	<u></u>
<input type="checkbox"/> Div/Post Installation Schools	<u></u>

L.8.5.2 ☒ UNIT

<input type="checkbox"/> In-System (Embedded)	<u></u>
<input type="checkbox"/> Job-Station	<u></u>
<input type="checkbox"/> Individual Learning Ctr (ILC)	<u></u>
<input type="checkbox"/> Barracks/Home	<u></u>
<input checked="" type="checkbox"/> Garrison Training Area	<u></u>
<input type="checkbox"/> Local Training Area	<u></u>
<input type="checkbox"/> Major Training	<u></u>
<input type="checkbox"/> National Range	<u></u>

FAMILY: L

MEMBER: 8

L.8.5.3	<input checked="" type="checkbox"/> REQUIREMENTS:	<u>COMMENTS</u>
		<u>Simulated or actual TOC, map and game board, normal communi-</u>
		<u>cation net and equipment.</u>
L.8.6	<u>EXPORTABILITY:</u>	
	<u>    In Units</u> <input checked="" type="checkbox"/> <u>Planning</u> <u>    No</u>	
L.8.6.1	INITIAL OPERATIONAL CAPABILITY DATE:	
	<u>    Currently Available</u>	
	<input checked="" type="checkbox"/> <u>Future Date</u>	<u>March 1978.</u>
	<u>    Unknown</u>	
L.8.6.2	METHOD:	
	<input checked="" type="checkbox"/> <u>Mail/Ship</u>	
	<u>    Install</u>	
	<u>    Remote Access (Telecommunications)</u>	
	<u>    In System</u>	
	<u>    Job Materials</u>	
L.8.6.3	BASIS OF ISSUE:	
	<u>    On Demand</u>	
	<input checked="" type="checkbox"/> <u>Unit Issue</u>	<u>One per division.</u>
L.8.6.4	SOURCE:	
	<input checked="" type="checkbox"/> <u>Known</u>	<u>Ft. Leavenworth, KA.</u>
	<u>    Probable</u>	
	<u>    Unknown</u>	



FAMILY: L  
MEMBER: 8

L.8.7 SUPPORT REQUIREMENTS:		COMMENTS
L.8.7.1	LOGISTICAL SUPPORT:	
	<input type="checkbox"/> Storage Areas	
	<input type="checkbox"/> Spare Parts	
	<input type="checkbox"/> Additional Copies On Hand	
	<input type="checkbox"/> Expendable Material	
L.8.7.2	MAINTENANCE REQUIREMENTS:	
	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
	<input type="checkbox"/> Operator	
	<input type="checkbox"/> Organizational Maintenance	
	<input type="checkbox"/> Direct Support Maintenance	
	<input type="checkbox"/> General Support Maintenance	
	<input type="checkbox"/> Depot Maintenance	
L.8.7.3	MANNING REQUIREMENTS: Total = <u>17+</u> or 31+	
	<input type="checkbox"/> System Operators	
	<input type="checkbox"/> Instructors/Facilitators	
	<input checked="" type="checkbox"/> Simulation/Monitor Positions	Open: 1 Controller, 16 Players/Controllers.
	<input type="checkbox"/> Support Personnel	Closed: 1 Controller, 30 Players/Controllers.
L.8.7.4	SCHOOL OPERATIONAL SUPPORT:	
	<input type="checkbox"/> Special Personnel Skills	
	<input type="checkbox"/> Special Equipment	
	<input type="checkbox"/> Facility	
	<input type="checkbox"/> Reproduction	
	<input type="checkbox"/> Update	

FAMILY: LMEMBER: 8

L.8.8	<u>COST DATA:</u>	<u>COMMENTS</u>
L.8.8.1	SYSTEM ACQUISITION:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.8.8.2	CURRENT OR PROJECTED OPERATIONAL COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.8.8.3	MAINTENANCE COSTS:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input type="checkbox"/> Low	
	<input checked="" type="checkbox"/> None	
L.8.8.4	TRAINING MATERIALS DEVELOPMENT:	
	<input type="checkbox"/> High	
	<input type="checkbox"/> Medium	
	<input checked="" type="checkbox"/> Low	
	<input type="checkbox"/> None	
L.8.9	<u>TRAINEE PREREQUISITES:</u>	
	<input type="checkbox"/> Education	
	<input type="checkbox"/> Physical Skills	
	<input type="checkbox"/> Mental Skills	
	<input type="checkbox"/> MOS Requirements	
	<input type="checkbox"/> Aptitudes	
	<input type="checkbox"/> Schools/Courses	
	<input type="checkbox"/> Training	
	<input checked="" type="checkbox"/> Other	Requires 3 hours prior training.
	<input type="checkbox"/> None	

FAMILY: L  
MEMBER: 8

L.3.10 ADDITIONAL COMMENTS SHEET: